JOURNAL OF
PHILOSOPHICAL
STUDIES

VOL. VI, NO. 21. JANUARY 1931

THE CONCEPTION OF REALITY AS A WHOLE

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THE subject of the present paper is the central conception of a philosophy that has been particularly dominant and influential, and the following remarks are prompted because of difficulties experienced in the attempt to understand that philosophy. The aim of the paper is to point out what seems to be a serious defect in that type of philosophy; but it is even more its aim to emphasize the danger into which philosophy in all its forms may easily fall, and against which it must exercise precautions.

The philosophy in question regards philosophy as the impulse towards wholeness. It defines philosophy as a study of reality as a whole in contrast to the sciences which deal with specific sections of reality. Now there are initial difficulties in this attitude. What is in question may be only a matter of definition, and even then presumably only definition of a purely provisional nature. But definitions may seriously mislead. When philosophy is said to be a study of reality as a whole, is it *known* that reality is a whole, or is it only being assumed that it is a whole? If it is known to be, or even assumed to be, a whole, it must be known or assumed to be a whole of a certain *kind*. It cannot be admitted that reality is *known* to be a certain kind of whole nor even to be a whole at all. It is the business of philosophy to establish whether it is or it is not a whole, and what sort of whole it is. But if that has to be established, it is hardly safe to define philosophy as a study of reality as a whole. It is not altogether safe even to assume it. Assumptions certainly are made even by the sciences; but assumptions may be made of such a

form and under such circumstances as to be a source of error. They may be made in a specific case to facilitate a solution to a definite problem; or something may be assumed which has to be established—that is, it may be the answer that is assumed. The only justifiable initial attitude towards philosophy is to define its nature by formulating its central or its most general *problem*; and in reference to reality the problem would be: Is reality a whole? And involved in that would be the question: Is it a specific kind of whole, and, if so, what is its specific nature? These questions would require a preliminary definition or consideration of different kinds of wholes. It would have to be decided whether there was only one thing that could be called *a whole* or whether there were different kinds of wholes. It is possible that such a preliminary consideration would lead to a view of philosophy as an attempt to discover whether there were any characters or relations that pervaded all sections of reality and that were therefore universal. Philosophy would thus have to be distinguished from the special sciences by the *generality* of its problem. Such a view of philosophy involves no prejudgment of the question whether reality is a whole. The answer to that question will depend on whether any all-pervasive characters are discovered.

The force of these requirements is brought home by a marked feature of those theories which interpret philosophy as a study of reality as a whole. That feature is their inability to define in clear and unambiguous terms what it is they are searching for, and likewise their inability to get hold of anything which will satisfy some demand which they cannot clearly specify. The present paper will endeavour to show this confusion that is present—a confusion that is only intensified by the vagueness and ambiguities of phraseology.

The immediate question which is to be discussed is: How is wholeness to be understood? Is there any one particular way in which it is to be understood? Statements such as "unity is the root of all things" or "everywhere the one comes before the many" are unsatisfactory, for they have no clear meaning and require elucidation. The meaning of unity is just as obscure as that of wholeness. It is a matter not merely of metaphysical interest, but of logical, moral, social, and political interest, for the ideas of unity and wholeness are employed in all these spheres. It is all the more important because the wholeness of reality is generally discussed by reference to, and in contrast to, various kinds of wholes which are capable of scientific investigation.

In the type of philosophy under discussion, as well as in other philosophies, emphasis is laid on a distinction between a social whole, a whole such as mind, an organic whole, a mechanical whole,

and an aggregate.[1] These distinctions are largely due to the influence of the comparatively new biological and psychological sciences, especially biology, with its conception of organism and organization. A reaction set in against the older conceptions, which were formulated by physical science, and which were applied to the interpretation of society and of the nature of reality. Such interpretations based on these older conceptions are now usually labelled "mechanical." The conceptions of the newer sciences are held to be more suitable for the understanding of reality. Under the influence of assumptions,partly psychological and partly axiological (for instance, such as that embodied in the statement that we must interpret reality in terms of the highest that we know), mind was supposed to constitute the model of a whole in the light of which reality should be understood.[2] With the development of the social sciences, and with increasing emphasis upon the social character of mind and upon the mental character of society, a still further analogy for the interpretation of reality is provided, leading to the idea of reality as a community of selves.[3]

Bosanquet asserts that "we experience the Absolute better than we experience anything else. . . . We all of us experience the Absolute, because the Absolute is in everything." "We experience it more fully than we experience anything else."[4] The meaning of these statements, though to some extent familiar through the influence of religious teaching, are philosophically decidedly obscure. Experience is one of those terms which admit of endless dispute, and it is used here just as vaguely as it is used by Hume—that pet aversion of the partisans of the whole. But whatever it may mean, it evidently does not mean that the Absolute is known, for otherwise it is not clear why analogies should be used by Bosanquet and others to elucidate the nature of the wholeness of reality. The employment of analogies at least suggests that reality as a whole is not known, and that information about its nature has to be elaborated on the basis of what is at most supposed to be an approximation. If the Absolute were experienced in the sense of being consciously apprehended or intuited, an investigation of its nature could be carried on directly, and the results of such investigation would enable the kind of whole to be determined. There would be no use of analogy to accomplish this purpose. That the information attainable regarding the nature of reality as a whole is only analogical appears in the vague and indefinite characterization which is finally

[1] Bosanquet, *Logic*, vol. i. p. 4. A. E. Taylor, *Elements of Metaphysics*, p. 100.

[2] See Bosanquet, *Philosophical Theory of the State*, especially ch. vii.

[3] Taylor, *op. cit.*, Bk. IV, ch. iii, p. 4.

[4] Bosanquet, *Individuality and Value*, p. 27.

given of the Absolute. Readers are continually led on ever nearer to the Absolute, but are in the end left just short of grasping its nature in spite of the promises held out.[1] From the point of view of knowledge, and hence presumably of philosophy, if the latter is a reasoned view of the universe, the philosophy of the whole is a failure and gives way to what is at best a faith. Doubt is justifiably cast upon the conception of philosophy as a study of reality as a whole.

If the philosophy of the whole fails to achieve what it gives promise of being able to do, it at any rate performs the very great service of directing attention to the need of critical analysis and careful definition of terms. One main cause of its failure—if not the only cause—is just this neglect of careful examination of its fundamental categories. There is a good deal in the statement of that philosophy which suggests that whole and unity are frequently confused; but above all the source of confusion is to be found in a lack of clearness as to what unity is. In the consideration of the nature of reality as a whole the initial task is to elucidate the meaning or meanings of unity. It is very important to grasp the fact that nothing much has been said when something—whether a thing, a machine, an organism, a society, or a mind—is declared to be a unity. Statements such as that "reality is one throughout," or that "reality is a unity," or that it has a "pervading unity,"[2] or phrases such as "vital or living unity," "logical unity," or "systematic unity," merely manifest the dangerous tendency of philosophy to indulge in meaningless generalities.

It is possible to detect in the frequent use of the term unity a highly questionable, in fact it can be said a completely erroneous, assumption. It is that the wholeness of any kind of whole lies in the presence of only one quality or one kind of relation which serves to define the whole in question. This assumption appears in the doctrine that ultimate reality must be "a systematic experience of which the components are likewise experiences." [3] The constituents of the whole are held to be of the same kind as the whole itself. A similar assumption appears in the conception of logical unity or logical system. Mind is interpreted as a logical system, and reality is interpreted in terms of mind as logical system. What is more likely to be true is that different types of wholes are to be distinguished from each other by the presence in each of some type or types of relations which are not to be found in the others, and which therefore serve to define the type. But it must not be supposed that this

[1] This is the effect which Bradley's *Appearance and Reality* and A. E. Taylor's *Elements of Metaphysics* (ch. ii) in particular produce on me.

[2] Bosanquet, *Logic*, vol. ii. pp. 207–8, 210. Cf. *Individuality and Value*, p. 19.

[3] Taylor, *op. cit.*, p. 97.

relation, which is peculiar to a certain whole and serves to define it, is the sole relation that constitutes its unity.

It is erroneous to suppose that the constituents of a whole must be alike in character to the whole itself. There is no whole with which man is acquainted and which is capable of investigation that gives support to any such supposition. There is no requirement that a machine be made up of machines, far less of similar machines; that an organism be made up of organisms, far less of similar organisms; that a mind be made up of minds; or that a heap of stones should be itself a stone. It is erroneous to assume that a whole must needs have any such simplicity of character. Bound up with this is the equally erroneous belief that there is any simple straightforward thing answering to the term unity, whether logical unity, vital unity, organic unity, conscious unity, mental unity, or even unity of purpose. That in which any such unity consists is exceedingly complex; and the term unity, when used in reference to reality as a whole, signifies something still more complex, probably so complex that it is questionable whether the nature of the unity can be grasped at all. Unity is attainable through the presence of different kinds of relations existing between the parts or constituents. Unity is not itself a relation in addition to and distinct from other relations. Logical unity is not a unique kind of relation, but an expression for certain properties of relations. The same applies to vital unity. "Living unity" as a fact in nature is a product of a vast and complicated set of relationships between various kinds of factors.

This criticism, it may be well to remark before passing on, assumes that the question about the meaning of unity resolves itself into a question concerning, first, the constituents of a whole, and, secondly, the relations between these. Much in the philosophy under consideration gives the impression that unity is conceived as consisting in an all-pervasive "stuff," somewhat analogous to oxygen, which is all-pervasive in the atmosphere, or to electricity, which is coming to be thought of as all-pervasive and as the primary matter of the universe. The oneness of reality would then have to be conceived as a oneness of material. The idea of oneness as being a matter of relation is distinct from this, though here again the oneness of the universe may be conceived as consisting in a oneness of relation. It is the fact of these two possible meanings of oneness that is one reason for the obscurity and vagueness in the use of the term unity. But there is still a third possible interpretation of unity, namely, as a complex of different relations. This is the unity which Bosanquet's doctrine of the concrete universal and his discussion of uniformity really intend to assert; but on the other hand, his insistence on mind as the clue to the nature of reality, and

his assertion that the Absolute is present in every part, actually imply that the oneness of reality is oneness of character, and hence involves adherence to the idea of uniformity which he wishes to exclude.

The unity of a whole, as appears in the case of all wholes with which man is acquainted, lies in relations. The more complex the whole, the more diverse and complex are the relations. In illustration of this, several types of wholes that are generally considered in theories of reality as a whole may be examined.[1] The first and simplest is a collection or aggregate. A collection is frequently distinguished from a machine, and both from an organism, and all from a social whole. Such wholes seem obviously different, and it would be folly to deny what seems so obvious. But the main question is: Wherein does the distinction lie, or what are the factors which make them distinct? What primarily defines a collection is the type of relation existing between the units. This of course applies to any whole. The distinctive relation in the case of a collection is expressed by "and" or "plus." Hence such a whole is spoken of as the sum of its parts—a description which is frequently but erroneously applied to a machine. Whether anything more is required to express the nature of a whole, such as a collection, is a controversial matter. Must there be a spatial relation—one of contiguity, or any spatial limit at all? A precious stone in England, a second in America, a third in Africa, and so on, would not constitute a collection; but the same spread on a table in a room or even several rooms in a museum would do so. The difficulty is that the items of a collection may be sent to several distant parts of the country or of the world, and yet the collection is still held to exist. This might seem to give support to the view that the wholeness of a collection is due to human purpose and purposive activity. On the other hand, a collection or aggregate may be effected by purely natural forces—such as a collection of pebbles on a beach, of various articles at the mouth of a river, or of plants in the corner of a garden. Hence the definition of a collection need not depend on how the collection was made, nor does it depend on how any purposive being views the units. The reason why the items of a collection sent to various distant places continue to be regarded as a collection is that their dispersal is known not to be permanent, as would be the case if they were offered for sale, but to be a purely temporary affair, a momentary interruption in their existence as a collection.

The basis on which a whole, such as a collection, is to be defined is thus primarily the kind of relation between the constituent

[1] Taylor, *op. cit.*, pp. 95–98. Bosanquet, *Philosophical Theory of the State*, p. 175. See also Giddings, *Principles of Sociology*, p. 420, for consideration of various wholes.

factors. When therefore it is said[1] that an aggregate "has no unitary character of its own which reveals itself in and through the behaviour of its elements," the statement may be a truism, or doubtful or ambiguous. It may be a truism in that it amounts merely to saying that an aggregate is a kind of whole that has not the character of another kind of whole. It may be doubtful in that the character of an aggregate is revealed by the behaviour of its units, for its character as an aggregate is discovered by the behaviour of its units. It may be ambiguous, for it is not clear what is demanded by the idea of *unitary character*.

A machine is an instance of another type of whole. It is said to have "a determinate single character as a whole which manifests itself in the structure of the various parts." [2] Statements such as these are frequent with the partisans of the whole, and they seek to emphasize a feature that assumes increasing importance as an approach is made to other wholes like an organism, a society, and reality. The parts composing a whole like a machine can exist before the whole and may exist apart from the whole. Yet it is a nearer approach to a true "systematic unity" than is an aggregate. Now, it is of course the case that a machine is not merely the sum of its parts; there may be the parts, but to get the machine the parts must be "assembled." "Assembling" means bringing the parts into definitely specifiable relations to each other, and that process is the construction of the machine. The set of relations which characterize a machine and which are expressed in the physical principles embodied in its construction is not coincident with the relations which characterize an aggregate, nor does the former necessarily displace the latter. A machine has still the character of being an aggregate, but it has also some additional character. Thus two wholes are not necessarily exclusive. The more complex whole may be at the same time the less complex. This would ultimately imply that reality as a whole may be a collection, a machine, and many other things besides. It is necessary to guard against discussing the nature of reality on the assumption that if reality has one feature it cannot have any other, or that its defining relation means the exclusion of every other type of relation. When a table is asserted to be brown, it is not meant that it is *only* brown and has no other additional qualities. The table is all its qualities; whether it is merely the aggregate of these qualities or whether there is some additional type of relation characteristic of it, as is meant when it is said that it is a unity of these qualities, is a specific question to be considered. The question is not answered by simply asserting that it is a unity of these qualities. The problem of reality as a whole can be viewed as being analogous.

[1] Taylor, *op. cit.*, p. 96. [2] *Ibid.*, *op. cit.*, p. 96.

An organism is another instance of a whole, and much controversy has arisen as to whether an organism is an instance of a type of whole distinct from that of which a machine is an instance or from any other type. A machine is sometimes regarded as being an instance of a "mechanical whole," and an organism an instance of an "organic whole." The primary question is one concerning the actual principles constitutive of the nature of these two types, and until this question is definitely settled it is futile to argue about whether an existing whole is to be labelled one kind or the other. When it is declared, as it is by some, that an organism is a machine, it is not necessarily being asserted that an organism is only an engine, even though a very complex and delicate machine. What may be meant is that organisms, so far as they have been investigated, have yielded to principles and laws that actually constitute, or are derived from those constituting, the body of the physical sciences, and that still further investigation will probably show that an organism is still further amenable to principles that are the same as, or that are derivable from, those of the physical sciences, or that will come to be principles of the physical sciences. Whether this means much or not is irrelevant at the moment. The "mechanical view" has been modified on account of the development of the physical sciences themselves. So far as the controversy about mechanism was conducted on the assumption that the mechanical view meant the reduction of organisms to a specific and limited set of principles called mechanical, science itself has put the controversy out of date. The principles of engines may differ so much that there are different types of engines. The mechanical view, if it is to be at all tenable, must be resolved into a highly abstract and general contention that organisms are capable of analytic investigation, and that such analysis will reveal the presence of laws or principles. What the character of these laws will be, or what the factors entering into their formulation will be, remains undetermined. The error of the older mechanical views lay in asserting or supposing that these factors were the factors entering into mechanical laws. At the most it could be said of mechanism that it was claiming to use known phenomena and known explanations as an analogy in order to investigate the unknown and mysterious organic phenomena.

Frequently an attempt is made to distinguish between an organism and a machine on the ground of a difference in their origin and mode of development. An organism, it is said, is not made but grows. The development of an organism is at the same time the generation of its members. How much importance is to be attached to this point? As a matter of fact the distinction is difficult to draw, and if adhered to might necessitate the rearrangement of the grading of the various types of wholes. It is true that organisms reproduce

their kind, while no machine is so far capable of doing so, though machines may produce simpler and different machines. On the other hand, an organism develops in the sense that its organs simultaneously or successively appear. But this general characterization will apply to a machine. That the parts of a machine exist before the whole, while that is not true of an organism, is a contention valid only if the term "parts" is arbitrarily interpreted. In the case of a machine, men are pictured fashioning the parts at each stage and fitting them to their position in the machine as it comes through the successive departments. There are clear *stages*, and there are agents. In the case of organisms there is not the same clear knowledge, although biology speaks of stages, and there may be agents of growth, though they are not fully known. If the distinction is adhered to, then whether a social whole is to be regarded as a mechanical whole or not will largely depend on theories regarding the mode of social growth. Some theories suggest that the mode is such that a social whole can hardly be differentiated from what is called a mechanical whole.

So far as investigation goes, organisms differ very widely in character—so much so that the phrase "organic unity" has no clear meaning. The unity of the higher organisms is not a simple affair, but a matter of a very complex set of relationships which are expressed in the mechanical, dynamical, and chemical principles at least, in terms of which vital processes are described and explained. There is the alimentary system with the physical processes of chewing and swallowing, and the chemical processes involved in mastication and digestion. There is the respiratory system involving the physical properties and action of the lungs, and the chemical processes connected with the substances inhaled and exhaled. There is the circulatory system with the processes connected with valves, pressure of fluid, contraction and distension, and so on. There is muscular contraction, action in accordance with the principles of levers, and so forth. These are merely some of the things to be noticed. All these are themselves again linked together. The set of relationships is thus exceedingly complex. The phrase "organic unity" accordingly appears as a term signifying this very complicated fact of diverse relationships. It does not signify any specific relation, nor does it signify the source of organic activity. An organic whole is hence not to be opposed to a machine or to a collection. It is a machine, or for that matter a number of machines; it is also a collection; but it may be admitted that in addition it has features which no machine so far constructed possesses, or at any rate which have not been reduced to any principles of the physical sciences.

A social whole is generally regarded as a higher type of whole.

At one time a social whole was interpreted in terms of the organic analogy. But contemporary thought tends to insist that a social whole is more than an organism.[1] The preceding argument is in harmony with this contention, but interprets it as meaning that a social whole does not thereby necessarily cease being a collection and also a machine. This additional character is due to the presence of factors and relationships which are not found in the constitution of organic wholes, machines, and collections. What is distinctive of a social whole is not merely "organization," [2] for so far as *meaning*, if not usage, is concerned, that term can be applied intelligibly to organisms and to machines, but the kind of organization involved; and the kind raises a question about the nature of the units and of the relationships between them, but primarily of the latter.

The case of a social whole, as was seen also in the case of organisms, provides another clear instance of the tendency to think that any whole must have and can have only one kind of relation determining its constitution, and that this is what its unity means. In the case of a social whole this relation is frequently spoken of as a "conscious relation" or a "conscious unity." Such a term may mean either a relation which is consciousness itself or else a relation of which there is consciousness. In the former case consciousness would be *the* relation which is characteristic of a social whole. In the latter case consciousness would be merely *a* conditioning factor, without which there would be no social whole. It is this latter meaning that is applicable to a social whole. There is not one sole relation of which consciousness is necessary. There is a host of relations which lie at the basis of a social whole and serve to constitute its unity. A distinction requires to be drawn between the relations and the consciousness of them. There may be a relation between a man and a motor-car, although the man may not be conscious of it, while consciousness of it may mean the difference between life and death.

A social whole is in a high degree conditioned by consciousness—so much so that it may be said that where the members are not conscious they do not constitute a *social* whole. But though it has this importance, it would be a fallacy to conclude that the other things, namely, the relationships, and that in which the relationships are found, are not also requisite. On the other hand, in the light of biological and certain psychological studies, it is possible to hold that there may be consciousness in some form although no social whole exists. What is distinctive of a social whole is the determination of conduct by way of consciousness of certain relations; and such consciousness appears as moral and social maxims, laws, rights, and obligations. These maxims, laws, and so on can be made an object of study; but an historical, as well as an analytic, investi-

[1] *E.g.* Giddings, *op. cit.*, p. 420. [2] As Giddings, *ibid.*, contends.

gation into their foundations will show that consciousness in the form of knowledge, or at least of belief concerning some non-social facts, plays an important part in their formulation. A great mass of social usages, rules, and institutions are due to a subtle transformation of non-social facts into social fact by the human mind—rather by *a* or by some human minds in the first instance.[1]

A considerable amount of recent investigation [2] shows that the doctrine of the social whole, supported by, and taken as a clue to the nature of metaphysical reality by, the partisans of the whole has not a clear field. It suggests that their views of a social whole rest, not on careful and detailed investigation of social wholes, but that they embody their own metaphysics. Any help to be derived from the use of an analogy is thus frustrated. The sense in which a social whole develops requires very careful elucidation; and even if development is admitted to occur, the facts may show that a social whole grows, not by an inner propulsion leading to the unfolding of some inner social reality, but by the grafting of ideas and of institutions based on ideas that frequently come from outside sources. Social growth takes place through the gradual modification of existing usages and structures under the influence of new ideas or beliefs, or through the adoption of such and their incorporation in the life of the group. In fact the rôle played by consciousness is scarcely to be distinguished from the part it plays in relation to the making and developing of machines.

Bosanquet asserts that in the case of a social whole the whole is present "in every part, not merely for the inference of the observer, but, in some degree, for the part itself, through the action of consciousness."[3] It cannot be literally meant that the whole is present in the part, nor is the meaning of the statement clarified by the phrase "in some degree." Statements to the effect that the "whole is present, though not equally, in the part, and the part is present in the whole," [4] do suggest that the conception of the whole requires some elucidation. How is the whole to be understood if it is such that it is present in every part, yet is present in different degrees in different parts, which are higher or lower according to the degree? What seems to be the case is that confusion has occurred between a whole and consciousness of that whole. Applied to social life, the statement that the "whole is present in every part" means that

[1] For this reason we should not accept Graham Wallas's view (*The Great Society*, p. 374): "New social arrangements to meet the needs of a new environment cannot be invented for the mass of mankind by a few professed thinkers, but must be the result of innumerable experiments in which as many individuals as possible have freely taken part."

[2] Especially the work of Professor Elliott Smith and W. J. Perry.

[3] *Philosophical Theory of the State*, p. 175. *Cf.* Taylor, *op. cit.*, p. 100.

[4] Taylor, *op. cit.*, p. 101.

each part is conscious of the whole,[1] and becomes intelligible. But though intelligible, it may not be true of a social whole. And even if it were true of a social whole, it may not help in the interpretation of the nature of reality as a whole, for all the parts of reality may not be conscious. It is at this point that the confusion between a whole and consciousness of a whole becomes very misleading.

The fact that consciousness is present leads very frequently to the assertion that the relations characteristic of a social whole are "psychical relations." [2] This involves the questionable assumption that because there is consciousness of something there is nothing but the psychical. There may be psychical relations, but everything of which there is consciousness need not be and is not psychical. Kinship is a factor that plays a part in some social wholes, and consciousness of that factor, probably in conjunction with a consciousness of some other factors which give some special significance to kinship, leads to its becoming a social bond and to the formulation of rules expressing rights and obligations. Attention to actual cases such as this serves to give definiteness to the idea of unity. What the individual citizen is conscious of is not the whole. In a complex social system no person can ever claim to know the whole, and it is for him something so vague and indefinite that he can never determine his conduct in accordance with it. What the average citizen does is to act in accordance with the accepted social code, expressed as rules and maxims. What the informed citizen does is to formulate one or more principles as the foundations on which the social system is reared, and in any specific case of action to deduce from them the correct thing to do. Social theory has the express task of formulating the principles which are fundamental in the sense that they are the premises from which the specific rules regulating the working of the social system are deduced. Its task is analogous to that of, say, geometry, which formulates the principles of a circle or of an ellipse, and which in any case where an arc of a circle or an ellipse is given enables the circle or ellipse to be completed.

The problem of social theory accordingly becomes much more definite. It is no longer a question about the relation of whole and part in the abstract. Any such abstract discussion results in vague and confused terminology. It fails to make clear what relations are being asserted. For instance, it is asserted that "an aggregate has no unitary character of its own which reveals itself in and through the behaviour of its own elements," or that "a whole of parts has a determinate single character as a whole, which manifests itself in

[1] That this is meant is suggested by Bosanquet's further remarks.

[2] *E.g.* Giddings, *op. cit.*, p. 420. *Cf.* Taylor, *op. cit.*, p. 97. "The unity is a conscious one."

the structure of the various parts"; or again, that "because the members form a single system, just as there can be nothing in the experience of any member which is not contained in the experience which is the whole, so, on the other side, there can be nothing in the whole which does not in some way affect the experience of every member." [1] Sometimes other expressions are used, such as that the whole is present in every part or that the nature of the whole determines the nature of the parts.[2] All such statements are attempts to define the nature of a whole, or rather of a *true* whole, such as reality is held to be by defining the relation between whole and part. But they are simply confusing. They assert relations that are very different from each other. The relation in one case is expressed by the term "manifesting itself in," in another case by the terms "containing" and "contained in," and again by the term "affect." It is also sometimes expressed by the term "presence in," and sometimes by the word "determine." The terms "affect" and "determine" suggest the idea of causality. But the causal relation is by no means identical with the relation "containing" or "being contained in"; while something may causally affect another, and *manifest itself in* it or *be present in* it only by way of its effect. Nor is the nature of the whole, and of the relation between it and the parts, clarified by the statement that "the whole is for its members as well as the members for the whole." [3] The phrase "is for" does not provide a solution; it states a problem as to that relation between whole and part which renders the state of affairs expressed by "is for" possible.

Most frequently the conception of ultimate reality seems to be reduced to a peculiarly simple form. The relation which is generally asserted to hold between whole and part is that of "containing." "The whole is an all-embracing experience." "Reality is a systematic experience of which the components are likewise experiences." [4] The relation "containing" is ambiguous. Points may be spoken of as being contained in a line, while in another sense a line is contained in or is a component of a larger line. Even apart from this ambiguity such a relation would be only one kind of relation; it does not necessarily imply that what is contained is of the same character as the container; and it is questionable whether it gives anything more than a *collection* instead of that unity which the theory craves for. Hence further efforts are made to supply the deficiency. "Reality is a subject which is the unity of subordinate subjects." [5] The term subordinate is no less ambiguous than the

[1] Taylor, *op. cit.*, pp. 96–97.

[2] *Ibid.*, p. 104. "It is the nature of the whole which determines the character of each of its constituents."

[3] *Ibid.*, p. 97. [4] *Ibid., op. cit.*, pp. 97–98. [5] *Ibid.*, p. 98.

others used. Mammals is a subordinate group of animals, and an individual citizen is subordinate to a governing authority. One group may be said to be contained in the other, but the citizen is not contained in the governing authority. The last resort is to describe the relations between whole and part as being of an "intimate character," [1] as being "indissoluble," [2] or as being "direct social relations." [3]

Evidently the consideration of various wholes does not provide fruitful analogies for the interpretation of reality as a whole. Even the analogy of a social whole is inadequate. The relation between the parts and the whole is unique, and no adequate conception of it can be framed.[4] Also "we must be prepared to entertain the possibility . . . that the individuals composing the Absolute fall into a number of groups, each consisting of members which have direct social relations of some kind with each other, but not with members of other groups." [5] The reason for this is that these groups may be of types so alien to each other that no direct communication, not even of an elementary kind, is possible. Two remarks on this seem justified. The first is that, if so, some members of the Absolute are different in kind from each other. Yet the components of the Absolute have been asserted to be experiences and the Absolute to be one Experience. Reality has been asserted to be exclusively composed of psychical facts.[6] All existence has been declared to be ultimately mental.[7] The components should not therefore be distinct. If they are, the assertions turn out to be false. The second remark is that if there are groups in the Absolute so alien to each other as to have no direct communication, that is presumably relations, even of an elementary kind, the Absolute is not after all a unity such has been held, but a collection made up of separate and distinct groups. There may be a greater *unity* in the parts than in the whole itself.

The result of the theory seems thus to be peculiarly unsatisfactory. The character of the whole seems incapable of description. Yet that ought not to be the case if the whole is present in every part. If such a statement means anything at all, it should mean, as is seen from Bosanquet's reference to an arc of a circle or an ellipse, which, the arc being given, can be constructed, that the analysis of any part of reality will reveal the *unity* which pervades all reality. It should mean that the relation found to exist in the part is the relation that runs through the whole. But the analogies used all refuse to give support to this interpretation. The unity of the parts is not the unity of the whole. The theory suffers from not knowing

[1] Taylor, p. 100. [2] *Ibid.*, p. 23. [3] *Ibid.*, p. 349.
[4] *Ibid.*, *op. cit.*, pp. 100, 350–352. [5] *Ibid.*, p. 349. [6] *Ibid.*, p. 347.
[7] *Ibid.*, p. 100. *Cf.* p. 103.

what exactly it wants because it has not first examined the conception of *unity*. It has really been in search of some all-pervasive character in virtue of which it could be shown that reality is a whole, and a whole of a definite kind. But it has failed to find any such all-pervasive character. It has failed to show that reality has even *any* general character.

THE PLACE OF GOD IN BERKELEY'S PHILOSOPHY

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Berkeley is commonly regarded as an idealist whose system is saved from subjectivism only by the advent of a God more violently *ex machina* than the God of any other philosopher. I hope to show that this accusation rests on a misunderstanding of his central theory, a misunderstanding which gives God a place both inconsistent with his main premisses and useless in his system. I hope also to display by quotation the real Berkeley, whose theory of God's place and nature is directly supported by argument and consistent with his premisses, and makes (with his account of self) a system which, if it is less than a completely coherent philosophy, is more than an episcopal assumption.

I shall first show how the usual conception of Berkeley's God arose. Locke had shown that our ideas of colour, taste and other secondary qualities depend on the percipient, but he held that primary qualities (shape, size, solidity, etc.) reside in the object just as we perceive them. Berkeley applied Locke's arguments about colour against shape and size, and showed that our ideas of the latter qualities were also relative to the percipient. Thus all my ideas depend on my perceiving them. This raises the obvious problem. "You ask me whether the books are in the study now, when no one is there to see them?"[1] "Upon shutting my eyes all the furniture in the room is reduced to nothing, and barely upon opening them it is again created."[2] Berkeley first suggests two inadequate solutions. "Whenever they [the books] are mentioned or discours'd of they are imagin'd and thought on. Therefore you can at no time ask me whether they exist or no, but by reason of that very question they must necessarily exist."[3] Not only perception but imagination (or conception) also confers existence, and it is therefore impossible to conceive something existing unconceived. He also suggests that physical objects may have a hypothetical or potential existence, anticipating Mill's view that an object is a permanent possibility of sensation. "The question whether the earth moves or no amounts in reality to no more than this, to wit, whether we have reason to con-

[1] C. i. 15. [2] P. § 45, i. 281. [3] C. i. 15. Cf. P. § 23. D. I, i. 411.

[All references are to the Oxford Edition of Berkeley's Works (Ed. Campbell Fraser, 4 vols., 1901) C. = *Commonplace Book*. P. = *Principles*. D. = *Dialogues*.]

clude, from what has been observed by astronomers, that if we were placed in such and such circumstances, and such or such a position, and distance both from the earth and sun, we should perceive the former to move among the choir of the planets."[1] Neither of these two solutions confer any real permanence or stability on the world of nature. "The trees are in the park, *i.e.* whether I will or no, whether I imagine anything about them or no. Let me but go thither and open my eyes by day, and I shall not avoid seeing them."[2] If *esse* is *percipi*, objects when perceived by no finite spirit must be kept in existence by God's perceiving them. "Seeing that they . . . have an existence distinct from being perceived by me, *there must be some other Mind wherein they exist.* As sure, therefore, as the sensible world really exists, so sure is there an infinite, omnipresent Spirit who contains and supports it."[3] This completes the orthodox account of Berkeley's view of the status of physical objects. The *esse* of ideas is *percipi*; the *esse* of spirit is *percipere*. "From what has been said it is evident that there is no other Substance than *Spirit*, or that which perceives."[4] "The question between me and the Materialists is not whether things have a *real* existence out of the mind of this or that person, but whether they have an *absolute* existence, distinct from being perceived by God, and exterior to *all* minds."[5] The *esse* of physical objects is therefore their being perceived by God. It is clear that this theory will save Berkeley from subjectivism, and it is to Divine perception that his editor, in defending him on the subjectivist charge, constantly makes appeal.[6] Yet it is a solution of the problem which excludes much of his most valuable work and raises more difficulties than it solves.

The alternative theory can best be approached through Berkeley's account of power or activity. We usually speak as if conditions of physical objects were due to the activity of other physical objects. But, in reducing physical objects to ideas in the mind, Berkeley saw that this view of cause could not stand. If the *esse* of ideas is *percipi*, "it follows that there is nothing in them but what is perceived; but whoever shall attend to his ideas, whether of sense or of reflexion, will not perceive in them any power or activity."[7] Therefore "the very being of an idea implies passivity or inertness in it."[7] Sometimes, however, I know that I have created my own ideas. When I imagine a ship, I am aware of the image but also of the activity of my self. Here perception differs from imagination; if I perceive a ship, I have no such awareness of spiritual activity. "It is that passive recognition of my own ideas that denominates the mind perceiving—that being the very essence of perception or that

[1] P. § 58, i. 290. [2] C. i. 65. [3] D. II, i. 424; Berkeley's italics. Cf. P. § 46.
[4] P. § 7, i. 261. [5] D. III, i. 452.
[6] Cf. i. 50, *n.* 4, 258, *n.* 3, 259, *n.* 5, and *passim*. [7] P. § 25, i. 271.

wherein perception consists."[1] Since I am aware that I do not create my own ideas of perception, some other agent must produce them in me. "I find I can excite ideas in my mind at pleasure. . . . This making and unmaking of ideas doth very properly denominate the mind active. . . . But, whatever powers I may have over my own thoughts, I find the ideas actually perceived by Sense have not a like dependence on *my* will."[2] The agent which produces them cannot be matter, for "Doth not *Matter*, in the common current acceptation of the word, signify an extended, solid, moveable, unthinking, inactive substance?"[3] This was indeed the account of matter current in Berkeley's day. Subsequent theories of atoms as centres of force, and the replacement of the Indestructibility of Matter by the Conservation of Energy as the basic principle of physics, left later scientists a way out of Berkeley's dilemma which was closed to his contemporaries. Against them his argument was conclusive. Since the agent affecting me when I perceive cannot be matter, and since spirit can be active, the cause must be spirit. "There is therefore some other Will or Spirit that produces them."[4] The nature of this Spirit can be deduced from its effects on me, from the character of my ideas of sense. Its power is clear from the fact that, however I try, I cannot perceive things otherwise than as I do. "The ideas of Sense are more strong, lively, and distinct than those of the Imagination; they have likewise a steadiness, order, and coherence, and are not excited at random, as those which are the effects of human wills often are, but in a regular train or series—the admirable connexion whereof sufficiently testifies the wisdom and benevolence of its Author."[5] It may be noted in passing that Berkeley uses no arguments from theology to support his belief in the existence of God, nor does he appeal to religious experience. He holds, indeed, that we have no immediate intuition of God.[6]

From the argument so far several difficulties in the usual account at once emerge. If mind is essentially active and perceiving essentially passive the *esse* of mind cannot be *percipere*. At the one place where in the *Commonplace Book* Berkeley says the *esse* of mind is *percipere* he has added later "or *velle, i.e. agere*."[7] I am most myself not in perceiving but in willing or imagining. "This making or unmaking of ideas doth very properly denominate the mind active."[8] God is Spirit, and to suppose that He perceives would be to make Him the passive recipient of ideas impressed on Him by some more powerful agency. Volition and not perception is therefore our clue to the nature of God. "The Spirit—the active thing—that which is soul and God—is the Will alone."[9] "Substance of a spirit is that it acts,"

[1] C. i. 83. [2] P. §§ 28, 29, i. 272-3. [3] D. II, i. 429.
[4] P. § 29, i. 273. [5] P. § 30, i. 273. [6] C. i. 51. Cf. P. § 148.
[7] C. i. 10. [8] P. § 28, i. 273. [9] C. i. 41.

causes, wills, operates."[1] Nor can the *esse* of ideas be *percipi*. The *esse* of my own fancies is that they are imagined, created by me; of my sense-data that they are created in me by God. The *esse* of *God's* ideas (if we find any reason to believe in them, which we shall not) would be that they were imagined by Him, and even this is made difficult by Berkeley's view that imagination presupposes perception. "The having ideas is not the same thing with perception. A man may have ideas when he only imagines. But then this imagination presupposeth perception."[2]

So we are led to a new conception of God, and of His relation to the stable world which our senses reveal. Its stability will now be due to the regularity and orderliness of His activity, and not to His permanently perceiving it. "Nothing without corresponds to our primary ideas but powers. Hence a direct and brief demonstration of an active, powerful Being, distinct from us, on whom we depend."[3] The laws of nature are not modes of relation between God's ideas, but "set rules, or established methods, wherein the Mind we depend on excites in us the ideas of Sense."[4] We learn that certain of our ideas regularly accompany others. This concomitance is due to "the Goodness and Wisdom of that Governing Spirit whose Will constitutes the laws of nature."[5] The situation is like that created by a "good resolution." If I resolve to tidy up my papers regularly on Ember Days, what exists permanently is a disposition of my will. What exists only on Ember Days is the spatial pattern I call "tidy papers." So the trees in the park are permanently represented only by a "resolve" of the will of God such that as occasion arises a spatial visual pattern (my idea of the trees) appears regularly in my mind. The physical world is thus really a complicated "good resolution" of God's. Two further illustrations may be adduced to show how a spatial datum may be regular and reliable, but not itself permanent. If I run my head into a brick wall, I see stars. The stars are not permanently there; they are the regular product of the meeting of my wayward steps with the permanent wall. So the table I perceive has no permanent shape or size; it is the regular product of the collision of my wayward activity with the permanent volition of God. Again, a magnetic field is force in itself invisible, but such that when iron filings are introduced into it they form regular, visible patterns. The application is obvious. We noticed above that one of Berkeley's inadequate solutions of his main problem was to allow the physical world a hypothetical or potential existence. This solution is now made possible for us by our having some reality from which the possibility is derived—the orderly volitional activity of God.

[1] C. i. 53. [2] C. i. 28. Cf. i. 52. [3] C. i. 60.
[4] P. § 30, i. 273. [5] P. § 32, i. 274.

"Bodies, etc., do exist even when not perceived—they being powers in the active being."[1]

This complete and coherent theory is much more entitled to be regarded as Berkeley's main position than that previously sketched. It alone is consistent with his distinction between perception and imagination, with his view that spirit is essentially active, and with his account of the relation between finite spirits and God. There seems, indeed, to be no need whatever in such a system for the realm of God's ideas. Yet Berkeley appears to have believed in them, as several references show, and as one of his special discussions may illustrate. One of the earliest queries in the *Commonplace Book* is, "Qu: Whether succession of ideas in the Divine Intellect?"[2] He later answers this query in the negative, and is then faced with the problem of the meaning of the Creation. He solves it by saying that, while God's ideas have existed from eternity, Creation occurred when He made them perceptible to finite spirits. But if "they became perceptible in the same manner and order as is described in Genesis,"[3] a further difficulty appears. The creation of sun and moon could not have meant their becoming perceptible to man, who was created two days later. Berkeley ingeniously introduces the angels, "there being other intelligences before man was created."[4] Berkeley also gives reasons why we cannot dispense with God's ideas. God must be omniscient as well as omnipotent, for "to know everything knowable is certainly a perfection."[5] "There is in the Deity Understanding as well as Will. He is no blind agent, and in truth a blind agent is a contradiction."[6] In the Third Dialogue Hylas suggests that power alone is sufficient to account for our sense-data without God's having ideas. Philonous replies, "A thing which hath no ideas in itself cannot impart them to me."[7] This does not seem obvious, especially when he goes on to allow[8] that God, without having sense-data, can impart sense-data to me, and when we recall that all ideas are sense-data or are derived from them. "Ideas of Sense are the archetypes. Ideas of imagination, dreams, etc., are copies, images, of these."[9] I hope to show that, despite these definite expressions of opinion, Berkeley did not make the Divine Ideas an essential part of his system, and that there is good reason to doubt whether he believed in them at all.

There are many reasons why he should not believe in them. What is to be the relation between my ideas and God's? At this moment I have my idea of the table before me, and God has His. Surely this raises all the difficulties of a correspondence theory against which

[1] C. i. 61.

[2] C. i. 58, accepting the view of Lorenz that p. 58 is Berkeley's earliest writing. [3] Letter to Percival, i. 353. [4] C. i. 42. Cf. D. III, i. 472, 3.

[5] D. III, i. 459. [6] C. i. 51. [7] D. III, i. 457.

[8] D.III, i. 459. [9] C. i. 52. Cf. i. 28.

Berkeley fought so persistently. All that he says against Matter can be applied to attack this new correspondence. "Qu. Did ever any man see any other things besides his own ideas, that he should compare them to these, and make these like unto them?"[1] "Well, say I, Do you apprehend or conceive what you say extension is like unto, or do you not? If the latter, how know you they are alike? How can you compare any things besides your own ideas?"[2] God's ideas are as useless as Matter in Locke's theory. "Ask a man, I mean a philosopher, why he supposes this vast structure, this compages of bodies? he shall be at a stand; he'll not have one word to say."[3] "But then, that they should suppose an innumerable multitude of created beings, which they acknowledge are not capable of producing any one effect in nature, and which therefore are made to no manner of purpose, since God might have done everything as well without them—this, I say, though we should allow it possible, must yet be a very unaccountable and extravagant supposition."[4] "How therefore can you suppose that an All-perfect Spirit, on whose Will all things have an absolute and immediate dependence, should need an instrument in His operations, or, not needing it, make use of it? Thus it seems to me you are obliged to own the use of a lifeless inactive instrument to be incompatible with the infinite perfection of God."[5] "The Will of an Omnipotent Spirit is no sooner exerted than executed, without the application of means."[6] In all these passages the objections are as valid against God's ideas—all ideas being inactive—as against Matter.

Again, if the reality our ideas represent is the world of God's ideas, Berkeley's principal claim for his theory must fall—his claim that it is a direct theory of perception. "We must with the mob place certainty in the senses."[7] "There are others who say the wall is not white, the fire is not hot, etc. We Irishmen cannot attain to these truths."[8] "We see the house itself, the church itself; it being an idea and nothing more."[9] What I perceive directly *is* the physical object, and all theories to the contrary are agnostic. "The reverse of the Principle introduced Scepticism."[10] "Colour, figure, motion, extension, and the like, considered only as so many *sensations* in the mind, are perfectly known. . . . But, if they are looked on as notes or images referred to *things* or *archetypes existing without the mind*, then we are involved all in scepticism. We see only the appearances, and not the real qualities of things. . . . All this scepticism follows from our supposing a difference between *things* and *ideas*." [11] It follows no

[1] C. i. 61. [2] C. i. 82. [3] C. i. 16.
[4] P. § 53, i. 287. Cf. D.II, i. 427. [5] D.II, i. 432.
[6] *Ibid.*, 433. [7] C. i. 44, Cf. D.I, i. 383. [8] C. i. 91.
[9] C. i. 9. Cf. D.III, i. 463, and especially i. 445. " . . . the real things are those very things I see and feel." [10] C. i. 83. [11] P. § 87, i. 305-6. Cf. D.I, i. 382, 418.

less inevitably from supposing a difference between our ideas and God's.

A further reason why Berkeley might well have dispensed with a belief in Divine Ideas is his reiterated assertion that ideas are inert and passive,[1] and the fact that God's ideas would have necessarily to be spatial.[2] " 'Tis nevertheless of great use to religion to take extension out of our idea of God, and put a power in its place. It seems dangerous to suppose extension, which is manifestly inert, in God."[3] It is equally dangerous to suppose any ideas (for all are inert) in God, who is pure activity. "I do not understand how our ideas, which are things altogether passive and inert, can be the essence, or any part (or like any part) of the essence or substance of God, who is an impassive, indivisible, pure, active being."[4]

It may be suggested that Berkeley can avoid the correspondence difficulty and the scepticism it involves by identifying our ideas with God's. On this view, when we perceive, God reveals His ideas to us. "There is an *omnipresent eternal Mind*, which Knows and comprehends all things, and exhibits them to our view in such a manner . . . as He Himself hath ordained." [5] This view is still open to the objection that things passive and inert can be no part of God, and to the further difficulty that all our sense-data are private, because of our varied view-points, as the "New Theory of Vision" exhaustively proved. An identification of our ideas with God's is also attributed by Berkeley to Malebranche as the view "that we see all things in God," and attacked accordingly. The dualism might also be avoided by holding that, in the act of perceiving, my mind is identified with God's—the theory used by T. H. Green in the case of conceptual relation. But Berkeley was much too vague about the implications of personality, and too stout a spiritual pluralist for moral reasons, to rob the finite self of any independence. If both these theories are rejected, the correspondence with its difficulties must stand.

For the reasons given above, it does not seem likely that Berkeley himself believed in the Divine Ideas, at least as a necessary part of his system. It is true that he frequently mentions them, but we shall now show that some of these expressions are suggestively guarded. In one place [6] he discusses the view that "Matter, though it be not perceived by us, is nevertheless perceived by God, to whom it is the occasion of exciting ideas in our minds." He remarks first that this theory gives up the absolute independence of matter, and is therefore "the only intelligible one that I can pick from what is said of unknown occasions," but he adds that "it seems too extravagant to deserve a confutation." Yet this extravaganza is identified by most critics

[1] *E.g.* i. 10, 13, 37, 41, 271, 429.
[2] This will be defended later. See *Note* at end.
[3] C. i. 82.
[4] D.II, i. 426.
[5] D.III, i. 447.
[6] P. § 70–75, i. 296 ff.

with Berkeleianism. "The upshot of all is, that there are certain *unknown* Ideas in the mind of God." "Whether there are such ideas in the mind of God I shall not dispute." [1] "I shall not dispute"—not only here, but in other places also, this is the best he can say for those Divine Ideas which are supposed to be the keystone of his own theory. Philonous is prepared to "allow" Hylas that there may be certain things perceived by the mind of God, which are to Him the occasion of producing ideas in us.[2] Berkeley is consulted on this very point by Rev. Samuel Johnson, who aims here a more shrewd blow against the Bishop than his notorious namesake. In reply Berkeley says he "has no objection against calling the Ideas in the Mind of God archetypes of ours."[3] He is prepared to "allow" Divine Ideas because they do not offend against his central doctrine that nothing is independent of Mind. But the admission is not readily made, for they are really foreign to his system.

It remains to ask why he should have mentioned them at all. Three reasons can be found. He probably came to them first; the simple symmetry of the crude theory sketched at the beginning of this paper makes it an obvious first refuge for a sinking subjectivist. If, however, such a development took place, it must have preceded all his published works, for the *Commonplace Book* shows the mature theory complete. The only shred of evidence for this suggestion may perhaps be found in the alteration of *percipere* to *agere* as the *esse* of spirit.[4] Secondly, theological considerations about omniscience would suggest the addition of the Divine Ideas to his completed system. Thirdly, it is much less alarming and revolutionary to think of the trees in the park existing when nobody perceives them, because they, with all their friendly, familiar qualities, are perceived by God, than to think of them as represented in God's mind by powers or volitions quite unlike them in character. Here is the real reason for the appearance of God's ideas in the published works, and especially in the popular Dialogues. In the *Commonplace Book*, Berkeley is uncompromising. "Bodies *taken for powers* do exist when not perceived." [5] "*Nothing* without corresponds to our primary ideas but powers." [6] But he resolves "Not to mention the combinations of powers, but to say the things—*the effects themselves*—do really exist, even when not actually perceived, but still with relation to perception." [7] And why? " 'Tis prudent to correct men's mistake without altering their language. This makes truth glide into their souls insensibly."[8]

If it is said that Divine perception is after all a possible theory and is quite definitely asserted by Berkeley, a much more striking example of his way of "humouring" his audience "in their own way

[1] P. § 76, i. 300. [2] D.II, i. 434. [3] Letter to Johnson, quoted, ii. 19.
[4] C. i. 10, quoted above. [5] C. i. 82. [6] C. i. 60.
[7] C. i. 50. Italics in last three quotations mine. [8] C. i. 71.

of talking"[1] can be adduced. In the *New Theory of Vision* he writes throughout as if tangible sense-data were independent of the percipient. The *Commonplace Book* shows that he had already decided that all sense-data were mind-dependent, so that this is part of a policy of gradualness. Not until the *Principles* does he attack tangibilia also. There is no question of development. The *Commonplace Book* (1705–8) gives the material for his whole system (except the technical term "notion"—the need of which is noted[2]); and the *New Theory* (1709), the *Principles* (1710), and the *Dialogues* (1713) show differences which are merely strategic. The Divine perception of the physical world is no more part of the system than is the independent reality of tangibilia. Both appear in the published works to mitigate the jar which the undiluted theory would administer to the plain man's system. The only difference between the two cases is that the reality of tangibilia (which is the more bluntly stated of the two) is incompatible with the whole system, while the existence of Divine Ideas conflicts only with parts of it, so that he can continue to treat their existence as an independently possible theological tenet, as the doctrine of the Trinity might be, but with as little connection with his philosophy as it has. "N.B. To use utmost caution not to give the least handle of offence to the Church or Churchmen."[3]

Campbell Fraser raises one point of difficulty for our insistence on the irrelevance of God's Ideas. The theory that our sense-data form a "natural language" continually recurs in Berkeley's works, and his editor explains the conception by saying "Sense-ideas are the letters of the alphabet in that language of natural order which God employs for the expression of *His* Ideas to us."[4] If this is correct, the natural language requires the existence of God's Ideas; otherwise the words of the language would be meaningless or express nothing. There are certainly difficulties about Berkeley's language theory. In the *New Theory of Vision* the words of the language were visible colours and shapes, and they stood for the real or tangible objects. But when tangibilia are overtly admitted to be mind-dependent a difficulty arises. If we say one type of sense-datum (visible) expresses another (tangible), we lose the distinction of status which we should expect to separate a language from what it means. If, on the other hand, we make the whole world of sense-data the language, and also eliminate God's Ideas as unknown and self-contradictory, what will the language express? Berkeley sometimes answers—the attributes of God. "The steady consistent methods of nature may not unfitly be styled the Language of its Author whereby he discovers his attributes to our view."[5] But in other places he says that sense-data stand for

[1] C. i. 92.
[2] i. 21, "improper . . . to make ourselves ideas, or thinking things ideas."
[3] C. i. 41. [4] i. 309, *n.* 2. [5] P. § 108, i. 317.

other sense-data; "the proper objects of sight"—light and colours—"do form a language wonderfully adapted to suggest and exhibit to us the distances, figures, situations, and various qualities of tangible objects . . . as words suggest the things signified by them." [1] Perhaps a *modus vivendi* might be arranged by distinguishing what words *express* from what they *evince*. If I say "There is the door," my words express a relation in space, but they evince anger. So God's words—our sense-data—express or suggest other sense-data, but evince His power and good will. Whatever our solution may be, there is never a suggestion in the whole of Berkeley's work that the "natural language" stands for God's ideas. This possibility is definitely rejected in the pamphlet *The Theory of Vision Vindicated and Explained*, which was published in 1732, and which is interesting also as giving one of the clearest statements of the view we have ventured to call "the real Berkeley." "The objects of sense . . . are called ideas. . . . From our ideas of sense, the inference of reason is good to power, cause, agent. But we may not infer that our ideas are like unto this Power, Cause, or Active Being. On the contrary, it seems evident that an idea can be only like another idea, and that in our ideas . . . there is nothing of power, causality, or agency included. . . . Whenever, therefore, the appellation of sensible *object* is used in a determined, intelligible sense, it is not applied to signify this absolutely existing outward cause or power, but the ideas themselves produced thereby. Ideas which are observed to be connected together are vulgarly considered under the relation of cause and effect, whereas, in strict and philosophic truth, they are only related as sign to the thing signified." [2]

It may also be objected that we have left "Siris" out of account. The reasons are many. If we exclude "Siris," Berkeley's system shows no development except the use of the word "notion" to cover our knowledge of spirits and some dissatisfaction with his attack on Abstract Ideas. In the "Siris" we find a new world. Its Platonic mysticism, its toleration of forms and influences, its reverent agnosticism, its dependence on the *Timæus* and Proclus, are poles apart from the Berkeley of the other works. It is true that Divine Ideas are important in "Siris," but they are no more than those "Forms" of Plato which the misunderstandings of Albinus and his followers (popularized by the deceptive transliteration of the Greek word "idea") had transmuted into "Ideas in the Divine Mind." There is nothing Berkeleian about them. To attempt to unite the hints and gropings of "Siris" into some kind of dusky Christian Platonism, and then to regard the result as characteristic of Berkeley, would be like making the Catholic faith the central belief of Voltaire on the strength of his reputed death-bed conversion. Catholicism and Voltaire make as strange bed-fellows as "Siris" and Berkeley.

[1] Alciphro IV. 10, ii. 168. [2] *Op. cit.*, §§ 12, 13, ii. 386.

If it is said that God must have some theoretical activity—He cannot be a blind agent—our answer is that this may well be true, but that all Berkeley's main tenets preclude it. His mistake no doubt was to limit theoretical activity to the passive reception of sense-data and their imaginative reproduction, and thereby to make such experience impossible for God. But Berkeley without these limitations is not Berkeley, but Kant or (as in "Siris") Plato. If he had extended his so-called doctrine of notions from spirits to relations, as he did, and from relations to universals, as he did not, he could have allowed God to have notions. "God knows or has ideas, but his ideas are not conveyed to him by sense as ours are." [1] But the first extension, to relations, is illegitimate, for relations are passive and notions are of the active. Such extensions would take us far beyond Berkeleianism, though they might take us nearer truth. They would recall too much the methods of last century's Hegelians, who, when they had to examine a philosopher, tended inevitably to "elicit" from him the Hegelian position or to "develop" him until it emerged.[2] Berkeley in the history of philosophy must always be the Berkeley of 1705 to 1713, and that means a Berkeley to whom God is essentially Will and not Thought.

Note.—There are certain considerations which suggest that God's ideas, if He has any, must be spatial. We might be tempted to hold that they are "unknown" [3] in character, but represented to us by spatial data, as are Kant's things-in-themselves. In illustration of this we might quote the army system in which disciplinary relationships are represented in most languages by spatial terms. Lance-corporals and bombardiers are "on the same level," and "above them" are corporals. If a savage had this organization described to him, he would naturally suppose that an army meant a large pyramidal pile of men with a Field-Marshal sitting "at the top" and a thick layer of oppressed privates "at the bottom." The growing use of graphs has familiarized most people with this idea of representing a function with two variables (non-spatial in character) by means of a line plotted with the aid of two spatial axes. Why should not God's ideas (themselves non-sparial, like the spiritual relationships which unite an army) be represented to us by spatial sense-data (as we say "transfer, degrade, sous-officier, High Command," etc.)?

The answer is that the two dimensions in an army are not inter-convertible. You could explain to a savage movements in each "dimension" taken separately; the ease with which a private could become a corporal compared with the difficulty of his becoming a general marks one "dimension," the simplicity of transferring from

[1] D. III, i. 458.
[2] Cf. Caird on Kant, or Bosanquet on Plato.
[3] P. § 75, quoted, p. 25.

one company to another contrasted with the difficulty of the transfer to another regiment giving the other. But you could not combine the two in a single measure; the distance between a Sergeant in the Seaforths and a Private of the Buffs is strictly immeasurable. In a spatial field there is such a "diagonal" distance. If X is three miles north of O and P is four miles west of X, then P is five miles north-west of O, both direction and distance being fully determinable. Space is a continuum whose three dimensions have a common unit of measure, and—here is the crucial point—it is the only continuum of this kind; therefore if God's ideas are to have all the varieties of relation which our ideas manifest, they must have a character which we find exemplified only in space itself. Otherwise the derivative will be richer in relations than that from which it is derived. Thus our illustrations by means of army organization, etc., all break down, and it seems that the reality our spatial ideas represent must itself be spatial. Here also, perhaps, we may find a reason for rejecting Berkeley's theory of the physical world, placing power in God, in favour of the view that places power in spatial centres. But the main aim of this paper was to determine what Berkeley himself believed, and not to find difficulties in his system.

BIOLOGICAL DEISM

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I

THOSE who still interest themselves in problems connected with God, Freedom, and Immortality are not accustomed to look to natural science for any light on these dark places. It is usually admitted that the scientific method operates with basic assumptions which are far from binding on philosophers, and which indeed have no very satisfactory metaphysical authority. In spite of a few protests by philosophers, scientific thinkers have on the whole felt entitled to neglect the philosophical consequences of their theories, and have gone ahead in the investigation of nature by accepting only such hypotheses as explained the maximum number of known facts, irrespective of their possible results on other fields of work. When a strictly scientific theory is invested with philosophical importance, some form of materialism, however well disguised, usually results.

The modern tendency to regard philosophy as simply an "activity" or method of criticism of the propositions of the natural sciences seems to get rid of the problems of God, Freedom, and Immortality by placing such subjects in the realm of the unspeakable, the realm about which it is impossible to formulate any statement which shall be logically sound. The result of philosophy, as Wittgenstein [1] says, is not a number of philosophical propositions, but rather the logical clarification of thoughts, the making propositions clear. And this view as Schlick [2] has pointed out, entirely precludes the possibility of there being any such thing as metaphysics, for the natural sciences are the only ontology we can have. "Most of the so-called metaphysical propositions are no propositions at all, but meaningless combinations of words, and the rest are not metaphysical but simply concealed scientific statements, the truth or falsehood of which can be ascertained by the ordinary methods of experience and observation."

Whether it would be advisable for the scientific worker to be suspicious of these tendencies in philosophy may well be questioned. While it might be in a certain sense agreeable to him to have his old enemy, metaphysics, done to death in this way, he may well

[1] L. Wittgenstein, *Tractatus Logico-Philosophicus*, 4·112.

[2] M. Schlick, Proceedings of the Seventh International Philosophical Congress, 1930.

ask whether, in order to criticize the concepts and propositions of natural science, some metaphysical foundation is not required. However, it is not my place as a biologist to enter upon the discussion of these very interesting but very difficult problems in philosophy; the purpose of this paper is rather to point to a certain number of instances in modern biology where biological speculation or theory appears to be so constructed as to be readily fitted in to the conclusions of philosophers and even theologians about man and the world. And just as the scientific worker may legitimately be sceptical of the arguments of those philosophers who deny the existence of metaphysics, so the philosopher will probably be well advised to pause before he erects any speculative structure so made as to fit in with the scientific theories in question. The advisability of some note of warning will be more apparent when the cases have been described.

II

The first instance of a change in scientific outlook which might deeply affect contemporary thought is concerned more with astronomy than with biology, except in so far as the earth as the home of living organisms is the primary biological datum. Historians of ideas have never tired of pointing out the importance of the influence which the Copernican revolution in astronomy had upon man's conception of the universe. Where before the earth had been the theatre of the divine drama of the Incarnation, the centre of the visible universe, it became no more than the moon of a star. "The discovery that the earth," as Inge [1] has put it, "instead of being the centre of a finite universe, like a dish with a dish-cover above it, is a planet revolving round the sun, which itself is only one of millions of stars, tore into shreds the Christian map of the universe." All this is now a commonplace, but what is not so well understood is the fact that modern astronomy tends, in a certain sense, to return to the pre-Copernican position, not of course as asserting the earth to be the centre of the universe, but as concluding that celestial bodies anything like the earth are extraordinarily rarely found in space.

In the last century it was common, accepting the view of the universe contained in the paragraph taken from Inge above, to suppose that every star in the heavens presented the closest analogy with our own sun, and that each was possessed of a solar system in which revolved at any rate a certain number of planets resembling our own. The nineteenth-century biologist was thus invited to believe that the conditions on our earth which have made life possible were almost infinitely repeated in an appallingly large

[1] W. R. Inge, *Science, Religion and Reality*, 1925, p. 357.

number of other solar systems. But this opinion can now no longer be held, for modern work in astronomy, which is summarized in the cosmological book of Jeans,[1] finds planets such as the earth to be extremely rare. There is no need to repeat here the list of narrow conditions of temperature, pressure, moisture, etc., which are requisite for the flourishing of biological systems; it is the rarity with which these seem to occur which is so interesting. The old view, as Jeans puts it, which considered every point of light in the sky as a possible home for life, is quite foreign to modern astronomy, for the very concept of life implies a considerable continuity of duration in time, and there cannot be any such thing at temperatures where atoms change their make-up millions of times every second, and no pair of atoms ever stay joined together. "We know of no type of astronomical body in which the conditions can be favourable to life except planets like our own revolving round a sun."

But planets only come into being when two stars approach one another close enough to induce a tidal action throwing out a long arm of incandescent gas which can condense locally into smaller bodies. And the closeness of approach must not be less than three star-diameters. "Calculation shows that even after a star has lived its life of millions of millions of years, the chance is still about a hundred thousand to one against its being a sun surrounded by planets." Far more common is the division of a star into two, forming a binary system such as we see in fairly near stars, such as Sirius and α-Centauri. And of course it goes without saying that any planet which is to support life must describe an orbit with very narrowly definable limits around the star which gave it its origin, for planets where liquids freeze, such as Neptune, are just as useless as planets where liquids boil, such as Mercury. "All this suggests that only an infinitesimally small corner of the universe can be in the least suited to form an abode of life. Primeval matter must go on transforming itself into radiation for millions of millions of years to produce a minute quantity of the inert ash on which life can exist. Then by an almost incredible accident this ash, and nothing else, must be torn out of the sun which has produced it, and condense into a planet. Even then this residue of ash must not be too hot or too cold, or life will be impossible."

Thus the astronomical work of Copernicus stands firm in its place in the scientific world-outlook; but what of the philosophical work with which he has always been credited? Would not the way almost be open, for any thinker with theological interests who wished to take it, to a re-establishment of that anthropocentric view of things which, as we always thought, was the most com-

[1] J. Jeans, *The Universe Around Us*, p. 331.

pletely dead of all mediæval superstitions? From the point of view of ethics, the traditional scientific emphasis on the immensity of the universe and the unimportant position of man, of living organisms as a whole, within it, seemed to liberate the human spirit from any preoccupation with the terrible responsibilities which had been the theme of both Greek and Christian theology. But if life should be so rare a thing in the universe, is there not a possibility that human responsibilities should again be taken seriously? And this is no mere academic question, for the scientific worker who appreciates the historical origins and conquests of what he stands for cannot see unmoved the return of the practical consequences of a profound belief in the anthropocentric universe. He will recall George Santayana's [1] sapphics:—

> But if they have forgot us, and the shifting
> Of sands has buried deep our thousand cities,
> Fell superstition then will seize upon them;
> Protean error,
>
> Will fill their panting heart with sickly phantoms
> Of sudden blinding good and monstrous evil;
> There will be miracles again, and torment,
> Dungeon, and fagot,—
>
> Until the patient earth, made dry and barren,
> Sheds all her herbage in a final winter,
> And the gods turn their eyes to some far distant
> Bright constellation.

III

The mention of responsibility leads on, by a natural transition, to the questions which surround the subject of scientific determinism and the subjective conviction of free choice which man possesses. Here also there are a good many indications that biological theory is being led to a position in which it might have no opposition to offer to the requirements even of classical theology on this subject.

Here the important factor is something which would at first sight appear far removed from any of these considerations, namely the size of living organisms. And we have to discuss, in the first instance, not the size of mammals or birds as wholes, but the sizes of their constituent parts. The progress of knowledge during this century in physiology and biochemistry has given us a fairly clear idea of the general plan and constitution of the contents of a living cell. We know that a tissue cell of one of the higher animals, a cell, for instance, which together with millions of other similar

[1] G. Santayana, *Poems*, 1922, p. 77.

cells makes up the central nervous system, consists of its cell membrane, its nucleus with the nuclear membrane, and its cytoplasm. The older view which attributed an anatomical fibrillar or network structure to the cytoplasm is now quite abandoned because the elaboration of techniques which permit us to examine the living cell without any interference with it has shown, practically speaking, no anatomical elements in the cytoplasm. We know the cytoplasm now to be a polyphasic colloidal system. Such a system can be pictured best by thinking of a homogeneous solution of a chemical substance in water, in which there float comparatively large globules of another chemical substance, immiscible with the medium, and consisting of a very large number of molecules gathered together (a colloidal aggregate). Within this globule there will be other globules existing in a similar dispersed condition, and others again within them. From these facts several conclusions follow: firstly, that the amount of surface in the living protoplasm is tremendously large relative to the mass of the whole system; secondly, that the main characteristic of the whole system is that it is extraordinarily heterogeneous; and thirdly, that the smallest constituent parts of it are very small indeed.

Exactly how small such constituent parts can be it is not possible as yet to say definitely, but as we know with accuracy the size of the atoms and molecules which enter into the composition of living matter, we find upon calculation that there is not much of a gap between the largest chemical molecules and the smallest colloidal phases which exist in the living cell. Similarly we can calculate a relation between the rarest chemical units and the size of the colloidal phases, in order to arrive at some idea of how many each would contain. When these calculations are made, it appears that a given colloidal phase in the interior of the cell-cytoplasm may contain only half a dozen of a given kind of molecule, or even as few as only one.

The same conclusion emerges with even more force if instead of considering a living cell in a tissue of one of the higher and larger organisms we consider the interior of one of the smaller unicellular organisms, such as the bacteria, or the ultra-filtrable viruses.[1] These latter organisms are so small as to be invisible with the ultramicroscope, and appear to possess an average diameter of 0·025 μ,[2] *i.e* about one-tenth the size of an ordinary bacillus, about the same size as the colloidal aggregates of dissolved hæmoglobin, and with room for only about 300 protein molecules. When it is remembered that the proteins form much the greater part by weight of living material, it can be seen that in such a small organism there

[1] See A. E. Boycott, *Proc. Roy. Soc. Med.*, 1928, *22*. 55.

[2] One μ is one-thousandth part of one millimetre.

could only be room for very few indeed of the rarer molecules, such as the sterol-compounds, and of the very rare molecules indeed, such as those of the vitamines, it would appear that only one organism in many thousands could, as it were, possess a copy. But it is not necessary to go as far as the vitamines for this conclusion, for there are chemical units of much simpler nature which may be equally rare and equally important. A recent calculation by Peters [1] in the case of the hydrogen ion shows this. At room temperature, as we believe, only one water molecule in 555,000,000 is dissociated into the hydrogen and hydroxyl ions, but when this number of water molecules is translated into terms of space, it is found to occupy a cube with a side of some $0 \cdot 25\,\mu$ in length, *i.e.* much larger than any ultra-filtrable virus organism, and about on the lower limit of ordinary microscopic vision. This living being, then, would be likely to contain at pH $7 \cdot 0$ (the common acidity of living cells) only one hydrogen ion.

What is the bearing of this somewhat technical discussion on the wider problems with which this paper is concerned? It is this, that where one of this and two of that and three of something else are concerned, we have to deal with conditions very different from those in which the well-known statistical laws of physics and chemistry were worked out. What we are now facing is the behaviour of individual particles and not of particles in the mass.

Anyone who is at all familiar with theoretical physics will appreciate the bearing of these biological facts upon the demonstration, for instance, of the statistical nature of the second law of thermodynamics. The regularity of microscopic phenomena, in which determinism is for all intents and purposes complete and trustworthy, is in reality a statistical regularity, and we cannot ascribe a similar regularity to events in the ultra-microscopic field. On these grounds Lillie, in an extremely interesting paper,[2] has sought to deduce psychological indeterminism from physical indeterminism. The actual calculation that in the deepest recesses of living matter disentropic phases may, and probably do, occur is not a new one (see Donnan [3]), but Lillie's particular contribution was the realization of the way in which the living organism is constructed to take advantage of individual fluctuations occurring in the colloidal phases of its cells. The living body is specialized in an extraordinary way for transmission. "The response to any stimulus," as Lillie says, "implies the transmission of an activating influence from the localized site of stimulation throughout the larger functional area concerned in the response. In other words, the protoplasmic system

[1] R. A. Peters, *Trans. Faraday Soc.*, 1930.

[2] R. S. Lillie, "Physical Indeterminism and Vital Action," *Science*, 1927, *66*. 139.

[3] F. G. Donnan, *Journ. Gen. Physiol.*, 1926, *8*. 685.

is characterized by a highly developed power of transmission." In this way it may be possible for an activity originating as a fluctuation in a minute protoplasmic phase to spread over the whole system, not only of the cell in which it occurs, but of all the cells in close connection with it. And in this way the behaviour of a higher organism, for instance, though indisputably determined as long as we confine our attention and analysis to the macroscopic phenomena involved in it, might really contain at bottom the element of individual action, of physical indeterminism. Lillie did not omit to give the often-quoted parallel of economic statistics, where correct predictions can be made of the number of voluntary acts such as suicide in a given population of individuals who are all subjectively convinced of their personal freedom. Free action, in any sense which could have a meaning for the philosopher, must presumably involve the conscious choice of the free agent between two or more alternative courses of action, and there seems no objection to seeing the physical side of this process in the unpredictable jump of an atom in one direction or the other. Only when the atoms are considered in very large numbers does prediction become possible, only when biological individuals are considered in very large numbers can predictions be made. "Just as submicroscopic events," says Lillie, "determine microscopic events (in biological systems), so behind or internal to the submicroscopic events we must assume a series of ultramicroscopic events reaching back by convergence into the field where the known types of physical determination are replaced by another type of determination, the special conditions of which we do not know. Apparently this type contains possibilities of a kind entirely different from those with which we are familiar from our experience of large-scale phenomena. In this field events occur which appear to be free, *i.e.* internally rather than externally determined, although as yet we can give no scientific account of the conditions of such determination."

IV

In thus considering the possibility of a recognition by science itself of an indeterminism at the basis of animal behaviour, we are brought to the borders of consciousness, and in this connection some interesting views have recently been put forward by geneticists. The relations between genetics and embryology have been very close for some years past, but the relations between genetics and psychology may be of even greater importance in the future.

The successive generations of a biological group such as humanity constitute, when looked at genetically, a great interwoven web. The

genes, the inherited particles which determine the potentialities of one particular individual, are derived partly from the maternal side and partly from the paternal, and so go back in branching fashion indefinitely. In the same way the particular gene-combination which exists in the individual in question is not destined to endure intact, but will be split up and part united with a set of genes from some individual of the opposite sex to form an individual of the succeeding generation. The personal peculiarities of the individual depend on what combination of strands has entered into him, modified of course by the environment which he has happened to have. What are the relations between the conscious, feeling, experiencing, knowing self, that which can say "I," and the physical gene-combination?

This difficult question has recently been considered by Jennings.[1] "To an observer standing apart from the web, it will not appear surprising that the different knots, since they are formed of different combinations of strands, should have different peculiarities, different characteristics. But that the observer himself—his total possibility of experience, that without which the whole universe would be to him non-existent—that he himself should be tied in relations of identity to a single one of the millions of knots in the web of strands that have come down from the past—this to the observer appears astonishing, perplexing." The self is impelled to ask whether it must be regarded as so much the product of the gene-combination, that if that particular gene-combination had never existed it itself would never have existed. It is easy, knowing as we do the proportion of possible individuals which ever come to fruition, to calculate what the chances are that the combination which produced a given individual self should ever have been made. One of the pre-existing combinations in man, *i.e.* one parent, produces during life about 17,000 germ-cells—the other considerably more, about 300 billions. As every germ-cell has a different combination of genes, and as any one of the 300 billions might have fertilized any one of the 17,000, the chance that any one particular combination of genes should be formed would be one in some five millions of billions. In addition to this, the chances against the union of either of the two parents in question have to be taken into account, and not only against their union, but also against their existence, since they came into being in a precisely similar way. "The system of notation which humanity has devised," as Jennings says, "would be inadequate to express the odds against the formation of the gene-combination of a given individual. If our conscious selves depend on the occurrence of the exact combination of genes, which

[1] H. S. Jennings, *The Biological Basis of Human Nature*, Faber & Faber, 1930.

as a matter of fact produced us, the odds are practically infinite against your existence or my existence."

Of the millions of billions of germ-cells produced, only four or five come to maturity. What of the possible personalities which are thus lost? If we regard the human personality as the highest and most real of entities, having value possessed by nothing else, as many philosophers have done, what is to be said of the infinite number of personalities whose existence was prepared for just as much as ours? The difficulties to which these facts give rise were felt very acutely, it is interesting to note, in the eighteenth century. The discovery of mammalian eggs by de Graaf [1] at the end of the seventeenth century was practically contemporary with the discovery of mammalian spermatozoa by Hamm and Leeuwenhoek.[2] But throughout practically the whole of the following hundred years there were disputes as to which of the two cells was the origin of the embryo, although to us it should have been obvious to common sense that both were required. There can be no doubt that one of the most powerful reasons which held back the acceptance of the spermatozoa as fundamental agents in generation was the difficulty of reconciling such prodigality on the part of nature with the doctrines of the soul which were universal in the eighteenth century. In 1757 d'Aumont[3] argued that nature would never be so prolific as to produce such millions of spermatic animalcules, each one with its soul, unnecessarily. In 1762 Cooke [4] elaborated a hypothesis of a "world of the unborn" to which spermatozoa could retire between each attempt to find a uterus in which to develop. But as time went on the facts proved too strong for the opponents of spermatozoa, and the picture of generation as we know it to-day was generally received. It was easy for the theologian to turn to scholastic examples, such as Duns Scotus, and to say that a soul was breathed into the body of the developing embryo when it had reached a stage of sufficient perfection to admit of it. But in modern times these simple solutions of the problem are of no avail, and since we know that genetical influences are not confined to physical characteristics, but include also, as far as we know, all mental characteristics too, the problem again presents itself before us.

Some other alternative, consistent with the facts of biology, may perhaps be found, and Jennings suggests that we may be wrong in our assumption that diversity of gene-combinations is wholly responsible for the origin of distinctness of selves. Cases exist where one and the same gene-combination gives rise to two distinct selves,

[1] R. de Graaf, *De Mulierum Organis Generationi*, Leyden, 1672.

[2] A. von Leeuwenhoek, *Phil. Trans. Roy. Soc.*, 1677, *12*. 1040.

[3] M. d'Aumont, article "Generation" in *Diderot's Encyclopædia*, 1757, vol. 7.

[4] J. Cooke, *New Theory of Generation*, London, 1762.

and these are what we know as identical twins. In such cases the egg divides into two separate individuals at a very early period in development, and subsequently the remarkable thing is, not that the twins are very like each other, not that there are differences between them, but that they are actually distinct selves, distinct personalities. Conversely, by the use of suitable technique, two egg-cells which would, if not interfered with, have gone on and produced two separate individuals may be made to fuse into one and to produce one individual only. So far this has only been accomplished for eggs of marine invertebrates, but it seems that only technical difficulties hinder its accomplishment in the case of man. Would such a fused organism possess two selves, struggling with each other for the possession of consciousness, holding the field alternately, or combined in some way into one? Are the cases of dual personality which have been studied in man possibly the result of some such experiment performed for us by Nature?

No answer exists for these questions, but Jennings seriously considers the possibility that neither gene-combinations nor environment will separately or together be found sufficient to account for the phenomena of personality. If so, it might be necessary to hold that "the human self is an entity existing independently of genes and gene-combinations, and that it merely enters at times into relations with one of the knots formed by the living web. If one particular combination or knot should not occur, it would enter into relation with another. Each of us might perhaps have existed with quite different characteristics from those we have—as our characteristics would indeed by different if we had lived under different environments." Could biology envisage the possibility of a limited store of selves? Could it regard the occurrence of two particular germ-cells, which might or might not unite, as having no determining value for the existence of selves, but merely furnishing a substratum to which for reasons unknown one of them might become temporarily attached? The fact that these questions can now be asked is important; it shows that biology has no doctrine of the self and no evidence to offer at present concerning the relations between selves and gene-combinations. And the question is therefore still open as to whether philosophers and theologians might not choose to accept doctrines with which the biology of the nineteenth century would have had nothing to do.

V

We have now observed three instances of an apparently favourable attitude existing in science itself towards a view of the world usually regarded as foreign to that of science. The position of life

as a whole on the earth and of man in particular seems to be very much more unusual and rare than had before been supposed. The penetration by biochemistry into the constitution of the living cell seems to reveal a state of affairs where individual action on the part of atoms, molecules, ions, etc., may amount to a radical indeterminism. The consideration of the relation between the conscious self and the mechanism of heredity shows that there may be something for which gene-combinations and environment will not account. Among these three points there is much in common. It is as if, faced with difficulties arising out of the problems of science itself, scientific thinkers were dealing with them in such a way as to invite co-operation with philosophers and theologians. Room is left for contiguity of theoretic structure, just as one building in a reconstructed street leaves a serrated edge of bricks for the neighbouring one to fit into.

This is the sense in which the (perhaps not very well chosen) title of this paper was intended. It is not at all inconceivable that these perplexities in science may tempt philosophers and theologians to take them as of more than temporary significance and to erect upon them a structure (in a certain sense apologetic) justifying some, at any rate, of the positions that all religions have always held. Deism, though not in the form which left its mark on English eighteenth-century thought, has still its representatives, especially among the theological Modernists, and the John Tolands and Matthew Tindals of to-day are as desirous as ever of maintaining a predominant place for reason in religion. The purpose of this paper, however, is twofold: firstly, to describe three of the more interesting biological problems and the way in which they are being treated; and secondly, to deprecate the possibility of their being used as philosophical or theological arguments. The principal reason why the philosopher may be well advised to steer clear of them is that their nature is essentially passing and transitory, and the principal reason why the theologian should adopt extreme caution in considering them is that even were they not transitory, they have little to do with that irrational alogical element which is the most valuable contribution of religion to life.

That these dilemmas *are* transitory is surely at least probable. In the case of the astronomical speculations about the position of living organisms in the universe, there may easily be a reversion of thought once more to the Copernican view. For although at present it seems unlikely that life as we know it could exist on more than an infinitesimal few of the bodies in the heavens, there is no reason for supposing that life in general is life as we know it. The argument with which Henderson [1] has made us familiar, namely, that the

[1] L. J. Henderson, *The Fitness of the Environment*, Macmillan, 1913.

properties of the components of the earth are as closely fitted to the properties of living organisms as *vice versa*, can only be admitted with the proviso that if the properties of things had been very different, living organisms with very different properties might well have come into being. Without going too far away from obvious possibility, it is easy to conceive of a living matter based upon the chemistry of the tellurium or selenium compounds instead of on that of the carbon compounds. And even among the organisms of our own world, which are composed primarily of the element of carbon, there are certain (as we suppose, very primitive) types which manifest a totally different kind of metabolism from that which is found in other creatures from the ordinary bacteria upwards, namely, the autotrophic bacteria, which obtain their energy by oxidizing inorganic materials such as iron and sulphur, or gases such as methane and carbon monoxide.[1] These facts should induce in us a recognition of our ignorance concerning possible types of life other than those which we habitually call by that name, and should leave open the possibility of the attachment of selves, for instance, to fundamentally different collocations of elements.

An element of the transitory appears again in the discussions of possible physical indeterminism in the minute phases of living matter. The state of physics at the present time is one of very rapid change, and the exact degree to which it is possible to apply determinism is not known. The Heisenberg principle of indeterminacy, for instance, while accepted by some workers as quite ultimate and irreplaceable, is regarded by others as only of an interim nature, so that perhaps it may again be possible to apply the deterministic scheme to individual particles and their motions. With regard to the motions of particles in ultramicroscopic phases in living organisms, it would seem that we have already in our possession the statistical laws of their actions, namely, all those regularities which living organisms exhibit. A particle in such a phase may take, say, one of two courses: it may react or not react, diffuse or not diffuse, and in 90 per cent. of cases it takes course A and not course B. Then the remaining 10 per cent. of cases simply represent the minority of aberrant results which are always met with in the making of any scientific generalization, for it must be remembered that, as Lillie has pointed out, the effects of the individual action in the ultramicroscopic phase, being transmitted by the peculiarly irritable nature of living matter, are mirrored on a macroscopic scale by the behaviour of the animal or whichever of its parts is under examination. The upshot of this discussion is that nothing "escapes" from the statistical laws which describe the behaviour of living organisms, except what could never be included in them, namely, the

[1] See M. Stephenson, *Bacterial Metabolism*, Longmans Green, 1930.

individual action and the corresponding impossibility of predicting it. In this way the principle of ultramicroscopic phases and their contents affords a satisfactory picture to the biologist, who thus succeeds in accounting for the otherwise mysterious capacity of choice possessed by individual animals, including himself, but it does not really make free choice any less mysterious for the philosopher. Moreover, if it should become possible, by means of the quantum theory or otherwise, to apply determinism theoretically to individual motions, then the scientific formulation would again move away from that of philosophy, and this may very possibly happen. For the regularities in quantum processes seem to be definite regularities, and no more to be infringed than the regularities of gross mechanics.

As for the deist theologian, it is to be feared that he will not welcome the information that the essence of religion is numinous experience. Any such assertion must, of course, seem unduly bold if it is unsupported by an elaboration of the theme, yet this is not the place or the opportunity to embark upon it. Should any deist, however, be under the impression that in order to make religion acceptable to the scientific worker it is primarily necessary to make it rational, he may be assured that this is not the case. Any satisfaction that can be got out of logical propositions may be found within the confines of science itself, for the outcome of the activity which we call natural science is doubtless propositions about things, and if we had to make a parallel we should have to say that the outcome of the activity which we call religion is judgments of value and numinous rites. Deism is the attempt to make religion scientific, an attempt which is foredoomed to failure, and if it be said that this is the negation of all theology, it may be answered that, after all, theologians are only philosophers who happen to be interested in religion and spend their lives, like poets, in trying to speak what cannot be spoken. There is at present a tendency among scientific thinkers to treat certain problems in such a way as to leave room for traditional theological and philosophical doctrines: or rather in such a way as to invite the expression of both in one all-inclusive formula. It may be predicted that this will not in the long run work, and that science and philosophy must go their own ways, avoiding all fusion as certain to lead to confusion. Biology on the one hand and Religion on the other are, some will say, indispensable properties of our existence; but biological deism, which happily we have not yet got actually with us, can never be more than a barren stirring together of immiscible opposites.

THE MESSAGE OF KANT

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It is very unfortunate that the philosopher who, as would be generally agreed, has had the greatest influence on modern thought is a writer whose style presents a particularly formidable barrier to the layman, or indeed to any reader tackling him for the first time; and this makes it all the more necessary that an effort should be made by those who have read and studied his works to communicate what they take to be the essential parts of his message. The present article is an attempt to fulfil a part of this function, *i.e.* to convey a few of the leading ideas of Kant's *Critique of Pure Reason*, while leaving aside altogether his other writings. I hope Kantian scholars will forgive me if in the attempt to make some of Kant's ideas clear in a very small space to readers who have not specialized in the subject but are interested in philosophy I seem not to do justice to the complexity of his finer distinctions. Also I had better add that this article is simply an attempt to state Kant's doctrine; it is not intended as an expression of my own views, and refrains from criticism.

Kant started with a problem which, although the formulation he gives it is his own, arises continually in the history of philosophy from Plato to the most recent times. He called it the problem of *a priori synthetic judgments*: it is the question how inferences can follow from their premises and yet give new knowledge not already assumed in the premises. The difficulty, expressed in colloquial language, is how we can get out of the premises what is not already in them, and if it is already in them, how inference can be anything more than a repetition of what we already know. Kant's solution, in general, is that the novelty of an inference must always depend on the presence of an empirical element, while pure thought can never originate anything fresh but only analyse what is already known. Experience can always tell us of fresh qualities not thought before by us. This did not, however, dispose of the difficulty raised by certain principles which, though they could be denied without any apparent self-contradiction, seemed to be both obviously true and necessary to science, and yet were *a priori* in character, telling us not that so-and-so had been observed to happen, but that everything which could possibly happen, whether it had been already observed or not, must conform to them. Examples of such principles are provided by the *a priori* judgments of mathematics, also by the

principle of causation, which is itself not provable empirically and yet on which the whole of science and all possible predictions as to the future seemed to depend. In dealing with these principles Kant developed a new method of proof which he called the *transcendental method.* It consisted in showing that without assuming such principles we could have no empirical knowledge or organized experience whatever, and that therefore we must choose between accepting them and taking the position of the absolute sceptic. Since *absolute* scepticism is an impossible alternative, this constitutes a proof of the truth of the principles. We cannot take the position of refusing to make any assertion whatever, of accepting nothing as true; a man may be a sceptic to a certain extent, but he cannot go as far as that in his scepticism. Indeed, even if he did, he would not be a very formidable opponent, for, in order to oppose, argument, and therefore assertion, is necessary, and the absolute sceptic would contradict himself the instant he spoke. All empirical knowledge (the term "experience" used by Kant may be regarded for this purpose as synonymous with "empirical knowledge") presupposes a certain organization of what we perceive, and this presupposes *a priori* principles or, as they are called in the *Critique of Pure Reason, categories.* especially it presupposes that there is a permanent element in the world, since change can only be known as against a permanent background (the category of substance); that all physical events are determined by causes preceding in time, since otherwise there would be no unity in change, and we cannot know a change even as a change without thinking it as a unity (the category of cause); and that all physical objects interact, since otherwise there would be no unity of the world in space, and unity, again, is a necessary condition of knowledge (the category of reciprocity). Kant tried to show that we cannot even think events in time without presupposing these categories, and that therefore the categories must be accepted if we are to have any knowledge at all.

Similarly, he argued that geometry was valid *a priori* of all external objects which we could know, because geometry followed from the nature of space, and we could not experience or know external objects except as they appeared to us in space. He thus claimed to have proved all the *a priori* principles which are essential to science by showing that they are involved in the conditions of all our "experience," or empirical knowledge, and it was this reference to the empirical which enabled them to give new knowledge (*i.e.* be "synthetic" principles, as he called it). Despite this empirical reference, they were still *a priori* and universal, because they were based not on particular experiences but on the nature of experience as such, and therefore must hold of all possible objects

of experience, everything of which we could ever be aware in our life.

A little while ago I said that for Kant all judgments giving new knowledge must involve an empirical element; but this is only half the truth, for his proof of the categories showed him likewise that they must involve an *a priori* element also. For in none of them do we merely take given sense-data; in all what is given is organized by the mind applying certain principles. If we discarded all *a priori* principles such as substance and cause, we could think nothing at all, for we can only think what has a certain form or unity. Knowledge is the organization of what is given, and we could not organize it at all unless we went on the assumption that it must conform to laws. The only reason for preferring one theory to another in science must be that it systematizes our experience better. Kant was very probably wrong as to the precise character of the *a priori* knowledge involved in science, *e.g.* it would now be generally admitted that the principle of conservation of matter is at most an empirical generalization, and not, as Kant supposed, a fundamental law of thought provable *a priori* from the very nature of experience; and Kant, of course, does not anticipate Einstein in his treatment of the primary postulates of geometry and of the nature of space, but he surely is not wrong in insisting that some general principles of ordering are implied in all judgments and all science. His message is all the more important now, when many thinkers, without having refuted his arguments, dismiss the conceptions of cause [1] and law as indefensible in philosophy and unnecessary for science, and reject with scorn the whole idea of a rational, ordered universe, failing to see that in so doing they are cutting away the very branch on which they must sit if they are to have any science or philosophy at all.

The difficulties involved in the application of these *a priori* principles to reality constitute the chief reason why Kant was what is usually called an "idealist." Knowledge involves the application of our laws of thought and our forms of perception to objects, but if objects are self-existent things quite independent of us, why should they conform to our laws of thought and our modes of perception? Is it not gross presumption to suppose that the laws of our little minds can dictate to reality what its nature should be? For Kant the only possible solution is to suppose that what we know is not reality but appearance. In that case there is no difficulty in

[1] Kant, however, thought of causation in phenomena not as involving mysterious dynamic powers in the objects, but only as equivalent to succession according to certain laws which made prediction possible. His view would therefore escape most of the objections commonly urged against "causality" or "necessity" in the physical world.

seeing why it should correspond to our laws of thought and our forms of perception, for otherwise it could not be known or experienced by us, *i.e.* could not appear to us, and therefore could not exist at all, since in any case it only exists as an appearance to us. Since physical objects only exist for our experience, which involves both their being perceived and their being thought by us, they must conform to our modes of perception and our categories of thought. We cannot hope to know ultimate reality; but we can indisputably know our own experience, and that, after all, is the only thing that can concern us. So far from thinking that this admission destroys or impairs the validity of science, Kant holds that it is the only possible way of saving science against philosophical scepticism, for he thinks that if science pretends to tell us about objects existing independently of our experience it is sheer illusion, and that it can only be saved by moderating its claims and admitting that it can give us knowledge only of appearances. On that view all the judgments of science and of everyday life about the physical world must be reinterpreted as statements not about the characteristics of physical objects as existing quite independently of us, but about what we in fact experience or should experience under given conditions. A law of nature means for Kant not that such-and-such an event must happen apart from our experience, but that we must always have a certain experience under given conditions. He does indeed admit "things-in-themselves" of which the physical world is the mere appearance, but he holds these to be absolutely unknowable, so it remains true of the physical world and the objects of science that they are nothing except for the experience of humanity. His case for "idealism" is strengthened by certain contradictions which he claims to find in the physical world, especially in connection with the problem of infinity, but his main reason is the one given above.

Whatever we think of the merits of this type of philosophical theory, we must recognize its enormous importance in the history of thought. In one form or other it dominated the philosophy of the nineteenth century almost entirely,[1] and now that the realist movement seems to have succeeded in shaking itself free of this way of thought in philosophy, we find it recurring ever more widely

[1] If we retain the "thing-in-itself," the doctrine remains an assertion that we cannot know anything about reality except in relation to our conscious experience. The step from this to the assertion that there is no reality out of relation to conscious experience seemed easy, though it makes a profound difference to one's philosophy. The former type of view may be traced in the agnostic and positivist writers of the last century, the latter in post-Kantian idealism, including Hegelianism, in the English thinkers influenced by Hegel, *e.g.* T. H. Green and Bosanquet, and in the followers of Croce and Gentile.

among those engaged in physical science. When a scientist argues that there can be no such thing as absolute position in space or time because we can only observe an object relatively to our own position, he is making the Kantian assumption that what we can say about the physical world only has meaning if it can be interpreted as a statement about what we observe or would observe under given conditions, and many scientific writers when they discuss philosophy now adopt views which are frankly "idealistic" in character. (Whether recent discoveries in science do really necessitate "idealism" is another question, which this is not the place to discuss.) In establishing "idealism" Kant was anticipated by Berkeley,[1] an author far too often decried by thinkers who ultimately have much more in common with him than they are willing to admit, and the two must share the credit; but Kant's idealism was undoubtedly the profounder. Unlike Berkeley, he emphasized not only the dependence of objects on mind, but also the dependence of at least our minds, as far as accessible to introspection, on objects; and, unlike Berkeley, he realized the importance and analysed the nature of the *a priori* elements in our thought and knowledge. It is not the business of this article to appraise or criticize "idealism" —I am not myself prepared to accept the view I have expounded— but, whatever we may think of its truth, its great influence (even if it was in many respects an unfortunate influence) on the development of thought cannot be denied. It has provided the starting-point for many philosophical systems which have at least done more justice to our higher experiences and approached nearer to a rational system of metaphysics than has been the case with any realist. It may of course be rejoined that perhaps no rational system is possible, and any appearance of the opposite is founded on illusion; but at least no one would be bold enough to maintain that we have nothing to learn from the great idealist philosophers, and their starting-point is always in one form or other the principle laid down by Kant (though they quickly discarded the unknowable thing-in-itself).

But whatever view we take of the physical world, we may admit that we can only arrive at conclusions about it by thinking of it *as it is for our experience*, though it may also hold a great deal more than what it holds for our experience. This fact seems to give the idealist point of view at the very least a certain relative validity

[1] Kant repudiates indignantly the form of idealism which he thinks Berkeley to have maintained, and while still calling himself an idealist in one sense of the term, actually gives various "refutations of idealism." But none of these involves the admission that we can know anything more than appearances, *i.e.* objects existing relatively to our experience, though the *Second Edition Refutation* suggests a valuable form of realism *within* idealism.

within realism; and Kant in the later part of his life, and even in the second edition of the *Critique of Pure Reason,* was feeling his way towards a higher point of view which would combine realism and idealism.

But the value of the *Critique of Pure Reason* is not confined to the introduction of idealism. The most influential conceptions which we owe to the work, apart from its somewhat disputable idealism, are perhaps Kant's view of knowledge and of the world as a systematic unity, his double view of the self, and his doctrine that the conception of God must be founded primarily on Ethics, together with his doctrine of regulative ideas. I shall give a short note on each of these leading lines of thought.

First comes the conception of knowledge and of the world as a systematic unity. This point has already been mentioned in connection with the proof of the categories; but even a short article like this would seem grossly defective if it did not mention and explain the formidable term, transcendental unity of apperception. As a matter of fact, its meaning is much less difficult to comprehend than one would expect from Kant's way of expressing it. It may perhaps best be understood as signifying self-identity in knowledge. The object of knowledge is never a mere undifferentiated unity; it is always a diversity, a manifold. But to know it even as a manifold we must think that manifold as a unity, and this for Kant implies two things. First, it implies that the self is a unity in knowing or *qua* knower, for we could not think A and B together, unless the self that thought A were in some sense the same as the self that thought B, or, in other words, unless A and B could enter into the same unity of consciousness. Secondly, it implies that the object of the knowledge itself constitutes a systematic unity, since otherwise it would not have the unity necessary for it to be known. Further, Kant thinks that these two unities are inseparable from each other. He does not argue, like previous thinkers, that because the self is a unity in knowing it is therefore a unity absolutely; on the contrary, he contends that its unity can only be realized in unifying the manifold given to it by the senses, only exists as it unifies this manifold. For he has only proved that the self is a unity by pointing to the fact of knowledge, and therefore could not argue that the self had unity in other respects than as knowing objects (at least if we leave aside ethical grounds). That the self is identical means for him that the self knows objects as constituting a unity. Thus, while it is true that as an idealist Kant holds that the unity of objects is due to the self, he also holds that the self can only realize its unity, at least as far as we can tell, in knowing objects.

For Kant all knowing involves a "synthesis," that is, a putting

together and a holding together in thought of the object known. Kant often speaks as though in knowing we actually manufactured the physical world out of a chaotic manifold of sensations by ordering these in conformity with our *a priori* categories, and thus was the originator of the, in my view, mistaken but very influential notion that knowing is best conceived as a kind of making. But whether we agree with this view or not, we must admit that knowing, if not itself a making, always involves some kind of synthesizing, ordering process, though it is perhaps not necessary to regard that as affecting the object of knowledge. All knowing, every possible judgment, presupposes or involves a bringing together of different concepts into a system. From this to the view that truth consists in the coherence of judgments in a system is not a long step, and I think it is fair to claim Kant as the founder of the so-called "coherence theory" of truth, though he did not develop its important and numerous implications. Also, in developing his doctrine of the "synthesis," he was the author of one of the most important discoveries ever made in psychology, namely, that perception always involves conception, at least at the human level. In bringing out the dynamic aspect of knowing as an active putting together of data he even anticipated the pragmatists.

Whatever we know we know as part of an objective world, and for Kant this means that it has to be referred to a system, since otherwise it would be incompatible with "the unity of experience." If we make any ordinary everyday judgment like, This table is round, or Iron is a metal, we are referring the qualities [1] round and metallic to objects. But what does this reference involve? Surely in so doing we are just making the quality referred a member of a system of facts of experience. For whatever "an object" means, it must mean at least a system of qualities and states; it may mean more, but it means this at any rate. And the conception of a system involves categories which carry with them a necessary connection between the different members of the system. Kant would not hold that necessary connection was sufficient to make a thing one substance persisting in time, but he would hold that if there were not a necessary connection between its successive states it would not be an object at all. If, for instance, the successive states of an ordinary physical object like a table were not causally connected, it would not be true to say that these were successive states of the table; on the contrary, we should have to say that the table was

[1] The argument does not necessarily presuppose that all judgments can legitimately be reduced to subject-predicate form, and still holds if we attach more importance in logic than Kant did to relations, for in any case relations must be attached to terms and the process of relating involves making a system.

annihilated each moment and a new one created *ex nihilo* to take its place. If certain experiences which we usually call observations of physical objects were not necessarily determined, so that, provided we choose to look, we must see so-and-so and not something quite different, we should have no means of distinguishing between genuine perceptions and illusions or between objective and subjective, for the distinction presupposes that genuine perceptions, experiences of the objective, are, so to speak, forced on us according to general laws, so that in certain important respects we have the same experience as any other human percipient under similar conditions. We can only arrive at the conception of a physical object at all by connecting different experiences of it which we and other people have at different times into a system; if we follow Kant's idealism, we will say it is merely that system of experiences; if we remain realists, we will say rather that, as far as it is known by us, it is the system of states which respectively give rise to these experiences. Kant had in view his doctrine that physical objects are not anything independent of us, but only our experiences as systematized; but personally I think that most of his arguments would, with only slight change, be valid also for the realist.

But there still remains the unknown thing-in-itself behind appearances, the belief in which was always retained by Kant, though rejected by his idealist successors. Kant held that we can only know things as they are in relation to our experience, as they appear to us, but he held that there was a reality behind the appearance. The nature of this reality we could not know; but we could in a sense know that there was something there, that the world was not merely appearances. A great deal in the appearances, the whole of their order and system, he explained by ascribing it to the constructive activity of our minds; but besides order there must be something to be ordered, besides relations there must be terms to be related, and this something be ascribed to things-in-themselves. The mind is responsible for ordering its world by the application of concepts, but it can only do so on the basis of data given in sensation, and, since we have no ground for supposing these to come from our mind or any other mind, we can only refer them to an unknowable x, the thing-in-itself. They must be due to something, but what the nature of that something is we, human beings, are not and, Kant thinks, never can be in a position to ascertain.

2. Kant's double view of the self. Any system of philosophy must admit that the self can be both knower and, at least in a sense, object known. The second is proved by the fact of introspection, the first by the occurrence of any knowledge at all. It is inexplicable that the self should be able to know not only

other objects but itself, that it should be at once subject and object to itself; but however inexplicable, we must accept it as a fact of experience. This Kant does, but he holds that it is not possible to know the real self, but only the self as it appears, this being indeed an inevitable consequence of his view that everything in time was mere appearance, not reality. This involves him in difficulties which we need not investigate here, but undoubtedly Kant was too inclined to suppose he could solve a problem by dismissing the thing which raised the problem as a mere appearance. For even appearances, since they are not simply nothing, must have some place in the real world. And it would generally be agreed that the distinction drawn by Kant between the real self and the appearance-self is too absolute to be tenable. But the self still possesses the two aspects mentioned by Kant, though perhaps it would be better not to regard one only as reality and degrade the other to mere appearance. From one point of view it is to be treated as any object of science; from another it is that for which in a sense all objects and all science exists. Some philosophers have held, like Kant, that this meant that the whole objective world depended on or was inseparable from the self as knower; but, whatever our views on this point, the distinction remains a highly important one. On the one hand, we must regard the self as a legitimate object of scientific study, and must examine it frankly and fearlessly, not hesitating to explain by causal laws everything that can be so explained; but, on the other hand, we must recognize that it is impossible ultimately to explain the fact of consciousness or knowledge in this way, that there is another aspect of the self, namely, the aspect of the self as knower, and that this aspect *in a sense* transcends the physical world and the temporal process altogether, since otherwise the self could not know what occurs at different times and places. This contrast is the basis of the whole attitude of idealist philosophy to the self: it enabled idealists, on the one hand, to insist that the sciences should be allowed free play even when they investigate what is so essential and sacred to us as our own self, and that even the self is subject to laws of causality; and, on the other, that the self is the only key to an understanding of the ultimate nature even of the physical world, and, in fact, of Reality as a whole. So it at once left psychology free to advance unencumbered by metaphysical presuppositions, and also safeguarded against naturalism what were held to be the spiritual interests of man. This does not prove its truth, but it was based on epistemological arguments which, though they win far less ready assent to-day, certainly cannot be dismissed lightly or adequately regarded as merely superficial fallacies due to a confusion between knowing and object known; and though it need not be accepted, it must not be despised

by a realist till he has worked out a richer and more coherent philosophy of mind than his opponents. But, as far as Kant is concerned, those who condemn such views as too dogmatic should remember that he protested in the strongest terms against any definite assertion as to the ultimate nature of the self, or the spiritual character of reality. The knowing self to Kant can only be known in its effects, *i.e.* knowledge, not in its own nature.

This brings us to the third point, the conception of regulative ideas. The philosophers prior to Kant had commonly treated God as being an object of knowledge in the same sense as any of the entities conceived by science. Further, since God was *ex hypothesi* omnipotent, they were thereby provided with a universal panacea for all intellectual difficulties, and indeed for all discrepancies between the facts and their pet theories: they could always say, God had willed it so, or, This phenomenon must be explained by the intervention of God, since it was inexplicable and impossible according to the laws of nature. Anyone who is familiar with even such great thinkers as Descartes and Leibniz will have no difficulty in finding examples of this practice in their writings, and if so, how must it have been abused by lesser men! Kant was convinced that to employ the conception of God in this fashion was not to solve a difficulty, but to say it was solved by some unknown means, to explain *ignolum per ignotius*, instead of striving to discover the natural causes involved by patient investigation or admitting our ignorance honestly if we could not achieve success in that way. It was therefore a mere piece of intellectual laziness fatal to the progress of real knowledge. As applied in philosophy, the method represented to Kant an extension of pure thought into a region where we could form no definite conceptions at all owing to the total absence of material provided by experience, and therefore were merely using terms without a meaning; as applied in science, it must always be futile, because to say that a particular phenomenon is due to God is only saying what, if true of any phenomena, must be true of all, and is therefore no help in explaining any particular one. This point needs little emphasis to-day; the Kantian attitude has triumphed so far that no scientific textbook would ever explain phenomena, the natural cause of which it could not find, by reference to the direct act of God, and at the same time we are all coming to realize, as Kant did, that the fact that phenomena follow laws and have physical causes need not be in the least inconsistent with their being ultimately due to some higher principle altogether, which we may perhaps call God. Kant was one of the pioneers of the "descriptive" theory of science, though he, I think rightly, still emphasizes "necessity" as involved in the causal connection. The discovery of causes in the sciences meant for him

the discovery of the laws according to which phenomena in fact occurred, *i.e.* finding what phenomena regularly followed other phenomena; it did not mean an ultimate explanation, for he realized as clearly as anyone that though we discover "laws of nature" in science, we can never see *why* these laws should hold good. We know, in fact, that water is made of oxygen and hydrogen, but we do not know *why* they should produce such a compound, and therefore cannot make the presence and properties of water any more intelligible by the discovery *that* they do. Since, therefore, scientific laws can give no ultimate explanation, it is quite possible that the laws may hold good universally among phenomena, and yet that the phenomenal, physical world may owe its existence to and find its real explanation in something quite different.

Kant, however, asserted that we can have no knowledge of reality at all, only of appearances. Even our own selves, he had said, we cannot possibly know as they really are, only as they appear to us. Nor would he admit that the appearances could give any clue to the reality whatever. But while he never admitted knowledge in the real sense of anything beyond appearances, he admitted something which, though not knowledge, was sufficient to justify a practical faith in God and immortality, and similarly in regard to human freedom, though his attitude is somewhat more positive there. Most philosophers would not now agree with Kant's particular way of distinguishing what we can know and what we cannot; and, indeed, if Kant had carried out his principles logically, he would have had to deny that we can either have knowledge or even hold a justified opinion in regard to many points (quite outside the sphere of religious controversy) where we must admit that we can. But however that may be, Kant did a great service to thought and religion in showing that we must not treat God as a concept of science, but rather as an ideal founded on our ethical experience, while not abating his faith in the moral government of the world and in the real existence of the being to whom this ideal has reference.

Kant drew a distinction between two kinds of principles, which he called *constitutive* and *regulative* respectively. The former, of which causality is an example, we can prove as necessary if we are to have any empirical knowledge or ordered experience at all; the latter are rather of the nature of ideals as to what we hope the world will turn out to be. These "regulative ideas" are not proved or provable by us, at least in the strict sense of the term; but they are not therefore useless, for they still serve the valuable purpose of stimulating and guiding us in research. The valid ideas connected with religion are for Kant regulative, not constitutive, in character, but they are far from being the only regulative principles. There are other vitally important unifying ideas connected not with

religion but with science. Thus the idea of the physical world as a complete system in which everything follows from a few simple principles must not be accepted as a self-evident truth; but it is all the same very useful, since it encourages us to find what unity there is and suggests to us hypotheses that bring together under one law or one system of laws phenomena originally explained by quite separate principles. All these hypotheses must be tested by their conformity with experience; but in order to advance in science it is not enough to experience or observe, we must also think of hypotheses on the basis of which to systematize the observed facts. This is indeed the fatal difficulty which prevents any ordinary man from being a great scientific discoverer; his eyes are as good as Newton's, but he does not know, and probably, even after a scientific training, could not think of the right facts to observe, *i.e.* those facts that are relevant, that are likely to prove some new law. There are no rules available the mere application of which will enable a man either to hit on new ideas or select the right facts to observe; but such is the difficulty of achieving this successfully that we cannot afford to dispense with any help available, and these very general ideas, if not dogmatically asserted as facts but rather sought as ideals, will often help, and have often helped in the past, to put scientists on the track of the right solution. Thus the "regulative idea" mentioned by Kant of a continuous succession of variations connecting the different species of animals, which at that time to all experience seemed so far apart, so absolutely separate from each other, has later been confirmed in the theory of evolution; but it must have been present in somebody's mind as an unestablished but promising general idea before he could even think of the hypothesis of evolution. The mechanistic view of the physical world is itself a regulative idea, according to Kant's later view, since it cannot be proved but provides a promising line of explanation. The scientist must not assert positively that everything physical is to be accounted for mechanistically, but he must try to find mechanism wherever he can; mechanism [1] need not be universal, but to look for it everywhere is the only way of finding out what there is of it. And Kant treats in a similar way the postulate that every part of a living organism must be regarded as fulfilling some biological purpose;[2] to say that both principles are

[1] Kant holds that universal causality is a constitutive, not a regulative, principle, but in the *Critique of Judgment*, where he deals with the problem specially, he treats mechanism not as synonymous with causation but as being a special kind of causation. But in the *Critique of Pure Reason* and his main ethical works he seems to regard all causation among phenomena as mechanistic. These were, however, written earlier.

[2] *I.e.*, for the benefit of the creature itself, not necessarily of man or other creatures.

regulative but not constitutive is his way of reconciling mechanism and teleology. The categories as constitutive principles give that measure of unity and rational system without which there could be no knowledge or ordered experience at all; the regulative principles (Kant commonly calls them "ideas of reason") stand for a higher degree of unity, system, and intelligibility which we cannot know, but may hope and, at least in some cases, even believe to be ultimately realized or realizable. But their utility lies not in any information they can give about the nature either of reality or of the phenomenal world, but in encouraging and helping us in the theoretical sphere to seek for more unity and intelligibility than we have yet found, and in the practical sphere to strive for the attainment of a supreme good that we under their inspiration treat as ultimately realizable. They represent not finished results to be accepted *a priori*, but a hope, a policy, an ideal.

ON DOING ONE'S BEST

Professor JOHN LAIRD

I

On page 157 of Bradley's *Ethical Studies* (the second edition) the following passage occurs: "There are few laws a breach of which (in obedience to a higher law) morality does not allow, and I believe there is none which is not to be broken in conceivable (imaginable) circumstances, though the necessity of deciding the question does not practically occur." And Bradley added the extremely significant footnote: "Except, of course, the universal law to do the best we can in the circumstances."

This footnote plainly contains the implication that there is one, and only one, moral obligation or imperative which is *never* overborne by a higher obligation or imperative. This is the obligation to do the best we can in any situation in which we may find ourselves; and the supreme imperative thus expressed is the ultimate moral determinant of all responsible action.

There are many who consider this principle self-evident, and who draw the consequence that "right" and "good" are not, even relatively, independent (as some allege), but, contrariwise, that "good" (*i.e.* in its superlative "best") does in the last analysis determine "right" (*i.e.* what anyone ought to do). Moreover, I am confident that many who doubt the principle, or who find a doubt gradually instilling itself just because they doubt the consequence I have mentioned, are, at any rate, not prepared to deny that the principle, to say the least, is very plausible indeed.

There is, however, a snare in plausibilities, and those cautious persons who are prepared to affirm only that the principle is superficially evident or highly plausible are certainly justified in asking whether it is possible to make the principle itself a little more explicit. For it might be applied (might it not?) in a good many different ways.

I propose, then, in this discussion to examine the *meaning* of Bradley's principle, without special reference to Bradley's ethical system or to any other. Furthermore, since the exegesis of the meaning of the principle is big enough (probably a good deal too big) for the space at my disposal, I shall leave the consequences of the principle to look after themselves. Even if the principle did not have the ultimate and quite crucial importance that Bradley (casually) claimed for it, it would, on any theory, be of considerable moment.

ON DOING ONE'S BEST

For a man who tries to do his best, or to "make the best of it," cannot, in general, be acting quite foolishly; and we all, very frequently, do make this endeavour.

II

In the first place, then, the principle clearly implies, *prima facie*, that we have an effective control over certain situations, and can decide between alternative courses of action, each of which *might* be our own act.

This is obviously a denial of fatalism, in the ordinary workaday sense of fatalism, which denies us the power of altering the course of events. Thus Dickens, in his despair, wrote: "It is not with me, a matter of will, or trial, or sufferance, or good humour, or making the best of it, or making the worst of it, any longer. It is all despairingly over. Have no lingering hope of me, or for me, in this association. A dismal failure has to be borne; and there an end." [1] Fatalism, of course, need not be dismal. For one's lot might be supremely fortunate. But fatalism does deny the possibility of making the best of it, or of making the worst of it.

It seems worth while inquiring, however, whether the principle denies, not fatalism only, but every species of philosophical determinism. To be sure, we are frequently informed by very modish writers that philosophical determinism has become something of a bogy now that it is legitimate for scientists like Schrödinger to postulate the indeterminacy of molecular, or ultra-molecular, mites. It is no longer necessary to hold that "iron" necessity rules throughout nature except (shall we say?) in the privileged sphere of the human will. Indeed, some scientists appear to be beginning to suspect that the human mind, and with it the human will, is the *least* determined event in nature, since it is "orderly," and atoms exemplify "randomness."

Nevertheless, a good many people, not quite irrationally, find it strange to believe that anything whatsoever, or any feature of anything, even the least, can happen *for no reason at all*. Such persons cannot be content with Dr. Johnson's famous saying, "Sir, the will is free, and there's an end on't." They may even doubt whether it is legitimate to say, "Sirs, the will is free, and there's a beginning on't." Consequently, it seems reasonable to ask whether injunctions to "make the best of it" could have any meaning whatsoever if, in reality, every event in human nature were uniquely determined.

Clearly, on determinist principles, we might correctly say: "A good man (or the best of men) would do so-and-so in such-and-such a

[1] Forster's *Life*, vol. iii. p. 173.

situation. A bad man (or a born devil) would do something quite different." Such statements say nothing whatsoever concerning the necessity or indeterminacy of good or bad action. They presuppose only that we can distinguish between good and bad action in the universe.

Again, instead of talking about good men and bad men in general, we might make our statements a good deal more pertinent to particular cases. For speaking as complete determinists we might legitimately say: "A man similar to you, and having similar antecedents, conceptions, capacities, etc., would do well if he acted in such-and-such a way in your situation, and would do ill if he acted in such-and-such another way."

It is easy to reply, of course, that similarity is not identity, and that very similar, but non-identical, beings may react very differently indeed to the same situation. But let us consider. Whether or not our actions *are* uniquely determined, neither we nor anybody else can *know* for certain how, or even that, they are determined. We know so little about ourselves, and other people know so little about us, that in regard to all our obscurer motives we cannot *appear* otherwise than as beings capable of several alternative courses of action. So far as our personal knowledge goes we are in a libertarian and not in a completely determinist situation.

Again, it is to be remembered that much of the discussion, at this point, is concerned with the efficacy of ideas (including ideas of right and wrong, good and bad) upon our actions, and of the extent to which we can be moved by commands, injunctions, advice, examples, fear of penalties, etc. On deterministic principles, however, there is no reason in the world why such injunctions and such motives should not influence us.

Therefore, according to determinism, it need not be useless to urge a man to act in *this* way and not to act in *that* way. Such exhortations might quite well be effective; and the man cannot say for certain, "I know I am not the sort of person who could act in *this* way," even if it were true in fact that there was only *one* thing he could do. Man is too much of a riddle to himself to have such knowledge.

I fear, however, that any injunction to "do the best one can" has (to use modern philosophical slang) a slightly Pickwickian flavour, unless it can properly be enjoined in the libertarian's sense.

III

In the second place, it is manifestly necessary to give some account of the "good" and of the comparison of what is good in terms of Bradley's principle. For "best" is the superlative of which "good"

is the positive, and "the best under the circumstances" is that which maximizes the good that is possible and minimizes the evil that might come about.

Regarding what is "good" in the sense here intended, it seems essential to point out that although doing one's best, or attempting to do one's best, is here represented as the supreme and as an invariable moral duty, it does not follow that the good which is sought is any way intrinsically moral.

Some moralists consider this statement paradoxical or worse. They believe, to speak with sententious pseudo-simplicity, that " 'tis only noble to be good." Or they are more Kantian than Kant (who held that there were other goods, viz., conditioned ones, besides the good will), and maintain that the *morally* good will is, or is the sole author of, *all* that is good. If we examine the question directly, and quite simply, however, we readily perceive that these contentions are mistaken.

Consider, for instance, such duties as self-culture or active beneficence. The first of these is the duty of cultivating one's talents, and plainly this duty must include much more than the mere cultivation of one's *moral* talents. A ship's officer who becomes as skilful a navigator as he can; a man of letters who becomes as expert in his craft as it is in him to become; a lover of beauty who gives himself to beauty with his whole soul—all these are making the best of themselves in some department of human culture. These attainments are not in any ordinary sense "moral," although the duty of endeavouring after them may be, and in many cases *is*, moral. What is more, the standards involved are not directly moral standards. It is æsthetics, for example, not ethics, that is the judge of beauty in art. Ethics has to accept æsthetic standards concerning what makes fine art fine; and it limits those standards at most in the sense that if what is lovely is also manifestly evil, such *fleurs du mal* should be banished from art.

Similarly in the instance of beneficence. It may well be a moral duty to strive for the comfort, health, and happiness of others, although these things in themselves, or rather in the recipients, need not be moral at all. There is nothing particularly moral in being free from tuberculosis, but it may well be a moral duty to diminish the chances of contracting tuberculosis by housing the people better. A parent is hardly doing his duty by his children if he does not give them the opportunity of fresh air and recreation in the country. Nevertheless *their* enjoyment, which *he* aims at, need not be moral at all. It may consist wholly in high spirits and in animal delight.

In short, the "best" according to Bradley's principle must be the best relatively to all possible goods, and in comparison with all possible evils, where "good" and "evil" are understood in the widest

sense possible, that is to say where values (as opposed to disvalues) of every species are included. Every value is admitted that might conceivably justify or tend to justify any man's action by bringing about a result that was worth anyone's while. There is no question of being concerned simply with virtue on the one hand and with sin on the other.

IV

It would seem, then, that in order to discover the best we can do we must theoretically be able to compare the entire range of goods and evils *inter se*. Is any such comparison authentically possible?

It is generally agreed nowadays, and, besides, it is pretty obvious of itself, that goods are much more diverse than pleasures, evils much more diverse than pains. A "moral arithmetic" in terms of algedonic (or pleasure-pain) units is in any case a proceeding that rests upon most dubious foundations. If, however, it is further conceded that such algedonic arithmetic neither is, nor bears any constant proportion to, the real overbalance of good and evil in most given cases, there is no point in debating these abstract questions concerning the arithmetic of pleasure-pain.

Can we, however, speak intelligibly of an overbalance of "good" or of the maximization of good in relation to evil?

Such language suggests an arithmetic of value, and in that case we have to ask what the value-units are, and what the disvalue-units are. This question seems likely to gravel a good many of us. It is most plausibly attacked by some doctrine of "marginal" preferences, always assuming that the preferences in question are good preferences, not simply statistical statements (if we could get reliable ones) concerning men's actual inclinations at any given time. Even so, however, the procedure is pretty obviously arbitrary; and the short of the whole story is that an arithmetic of value is a science (or pseudo-science) with very shaky foundations.

Suppose, however, we renounce the dream of a well-grounded or convincing value-arithmetic. In that case we might still maintain that significant and important comparisons of value are possible throughout the realm of values, and that the untidy and ramblingly pluralistic character of our moral theory is not appreciably worse than the untidiness of any other moral theory except for the very few moral theories that profess (not at all convincingly) to employ a single principle only.

This seems reasonable, or, at any rate, not unreasonable. Nevertheless it implies a belief in the general, if not even in the universal, *comparability* of all goods with one another and with all evils. And any such general comparability of goods and evils is strenuously disputed in many quarters.

Consider, for instance, what an ascetic moralist would say—and asceticism in some form is always with us, whether the form be industrial, athletic, sexual, artistic, patriotic, or religious. A moderate ascetic need not deny that many things which are not the best (let us say the "innocent" pleasures of the body) have a certain subordinate value. They are better, other things being equal, than gloom and animal misery. Such subordinate goods, however, according to the ascetic, are in no respect comparable to the goods of the mind, or of other-worldliness, or of any other supreme excellence upon which the particular brand of asceticism is based. According to the ascetic, any attempt to conjecture how much of a lower good is equal, or nearly equal, to a particular quantity of a higher one is more than half-way to betraying the higher. Between the two a great gulf is fixed.

It must be confessed, therefore, that there are serious difficulties in this matter. For if the ascetic view were true, it would follow that *no* amount of suffering, let us say, could equal in disvalue a single passing suspicion of impurity; and that also is an extreme paradox.

Perhaps, however, the problem is simpler than it looks. For if, as commonly in asceticism, there are held to be only two classes of goods, viz., the pure goods which alone are greatly good, and the muddy and mixed goods whose value, even in an infinite degree, is never comparable to the value of the pure goods, it would follow that the best must always be reckoned in the currency of the pure good whenever the pure good is possible (since the lower in comparison with the higher does not count *at all*), and that, where the higher is not possible, the comparison is between lower and subordinate goods pretty closely akin. This, if it were true, would simplify the problem of discovering the best. And although the problem would be more complicated if there were more than two classes of comparable goods and evils, each such class being incomparable with any other class, although the classes form an ascending ladder, the best (and perhaps the worst) might not be beyond all conjecture—if only we knew where the rungs in the ladder were placed.

At the same time, it seems plain that there is a veritable thicket of minor, but still of very serious, difficulties in this affair, and I shall mention two of them:—

(*a*) Assuming that some sort of trustworthy balance (not necessarily an arithmetical balance) between possible goods and evils may be struck in a great many or in most situations, can we say, quite simply, that we ought to adopt the course that shows the greatest overbalance of good, or, in unfortunate situations, the smallest underbalance? The answer does not seem to be clear, for it might readily be contended that a smaller overbalance in which much good (even perhaps of the tamer sort) were mixed with very

little evil (or with no evil at all) was better than a larger overbalance of good in which, despite the overbalance, there was also a great deal of foul and ugly evil. Even if the saints prevail, is a universe containing great saints and great sinners really better than one in which there is little serious vice, although, for the most part, only middling virtue? What truth, if any, is contained in the ingenious saying, *Redemptio pessimi optima*? It is possible, I concede, that the problem so stated contains some confusion regarding the reckoning of evil. There is a tendency to count the disvalue of evil twice over, once in the original reckoning, once again in horror at the extent of it even when it is overbalanced. But I do not think the question is easy to answer.

(*b*) Again, there is the problem of what Bentham called the "extent" of good and evil. Even if we adopted the simple and rather dubious principle of Benthamite democracy, viz., that each, unless for strong cause shown, is to count for one, and no one for more than one, we should still have to ask whether a slight and mediocre general welfare might not be preferable to a state of affairs in which a very few were supremely fortunate and the great majority in a neutral condition, even if the total overbalance of good were greater in the second case than in the first. Sydney Smith, if I remember him rightly, contended that the system of blanks and prizes in the emoluments of the Anglican clergy was better than the relatively confortable mediocrity of the incomes of dissenting ministers. Was there any substance in his contention? If not, why precisely was it wrong?

V

We have now discussed, or at any rate have indicated certain considerations that concern, the questions, firstly, whether there are moral alternatives in action, and secondly, what are the implications of the assessment of the values of such alternatives. But there is still much to interpret in Bradley's formula.

One possible meaning of "doing one's best," and, still more, of "making the best of it," would be an ethic of results. On this view an action is to be commended, morally speaking, if we adapt ourselves to our situation in such a way as to extract from the situation the most advantageous outcome that is possible.

On this interpretation the formula, regarded as a principle of moral theory, is manifestly open to very serious objection. I will not say that wisdom after the event, although it is (comparatively) easy, is useless. For how can we form any forecast of the future except upon the basis of a knowledge of past results? And if our expectations, in the normal case, bear no intelligible relation to the actual outcome, what is the point of looking ahead at all? Again, I will not say,

although it might be true, that the time-process is never closed, and consequently that what has had fortunate results up to the present may turn out to be a calamity in the end. No doubt, if our standards of value and our ascertainment of fact are hopelessly mistaken, it might be prudent to call no human actions successful until human history has ceased. The whole trend of what we call civilization may be a gigantic mistake, as future generations may come to see. On the other hand, if our standards of value and our information concerning fact have some health in them (and otherwise it seems meaningless to discuss the goodness of results or of anything else), we seem to have very good evidence both that a great deal in the past may reasonably be regarded as closed (having but an infinitesimal importance over what succeeded it), and that among these closed processes some were good and others bad.

What I mean is rather that if the "best" meant "the best results," there would be an insurmountable hiatus between the terms of this moral theory on the one hand, and the actual live situation of any moral agent on the other hand. All action is, in one sense, adventurous. We never can be quite sure concerning what will come of it. However prudent we may be, we always go out to meet an uncertain and, in part, a hazardous future. This is the situation of all action, including all moral action. For action is an adjustment *before the event.* Therefore, if we could judge a moral action only *after* the event, we should have to judge, not it, but something that came out of it. Our moral standards must apply to future-regarding actions with express reference to the necessary futurity of their intention. Accordingly the standard of actual results cannot be the sole, and is not likely to be the most important, standard of moral action.

Thus it is customary to say that the "best" in the sense intended in Bradley's principle is "the best that can be foreseen and intended," or the best "according to our lights"—that is to say, what is probably or most likely to be best. The most promising action, no doubt, may turn out disastrously; but at the time of action it may really have been the most promising, and therefore the course that, according to our lights, we were justified in pursuing. This is a commonplace in the theory of probability, and there are even certain theories of probability according to which the case is stronger than I have suggested it to be. On this view of probability, to hold that a certain course of action is likely, although not certain, to be good is just to hold that the action is good in most cases, although in a smaller proportion of cases it is not good. Our trouble, according to this theory, is simply that we do not know whether the particular case belongs to the fortunate majority or to the unfortunate minority. I am not relying upon this theory of probability, however—it is

called the class-frequency theory—because it seems to me to be plainly inapplicable to future probabilities. If the class-frequency view were true, we should know in advance that the ratio between fortunate and unfortunate actions of a given class would continue to be the same ratio in the future as it was in the past; and although we may frequently have goodish grounds for suspecting something of the sort (and still more frequently have no good reason for doubting it), it seems preposterous to maintain that we ever, in strictness, *know* anything of the kind.

Granting, however, that the rule is that we should do what is *probably* best in our circumstances, it may still be asked what this rule implies.

One thing that might be meant is that moral action should be directed towards what is probably best according to the best information in humanity's possession at the time of the action; and it is obvious that, if this were meant, the rule, in a great many instances at least, would be utterly impracticable. For what individual human being is possessed of the best of humanity's probable forecasts concerning all contingencies, and how, when prompt action is called for, could such an individual human being be expected to obtain this information? Again, morality intimately concerns the common man; and how can the common man (in general) be expected to possess the information?

Hence we are frequently informed either (1) that morality is concerned not with *all* probabilities, but only with the common-sense probabilities that everyone, not an idiot or a moron, must be expected to know, or (2) that everyone should do, not what *is* probably best, but what *seems to him* probably best.

Neither of these views seems satisfactory. The first, we may agree, is reasonably congruent with the commoner lists of moral commandments. Everyone may be supposed to know that it is usually best not to steal, assassinate, libel, or slander. It seems a sufficient objection, however, that the problem of "making the best of it" is in no way restricted to such commandments and common-sense probabilities. The principle draws upon all the skill that anyone may have in the art of living, all assistance of friends, all frustration of knaves. In a thousand ways each of us, if he would make the best of his circumstances, must go beyond the common-sense rules. They are nothing like a complete guide to wise living.

On the other hand, how can we say that each man *should* do what *seems* probably best in his own eyes? If this were the whole truth, any opinion that anyone chose to form concerning probabilities, however perfunctory, visionary, or muddle-headed, would justify him in acting accordingly. And that, surely, is absurd. Even if, in the end, the moral man has to do the best he can according to his

lights, it is at least assumed that he should also do his best to make his lights burn as clearly as possible.

In that case the rule would be that each should do what he believes to be probably best, provided that he has taken all reasonable pains to think out the relevant comparative probabilities. And this rule also would have to be interpreted with discretion. For young men have to act, and old men have sometimes to act in a hurry. Neither of them, therefore, may have had reasonable scope for thinking out the probabilities at all deeply. But more importantly the problem of the fanatic and of the conscientious objector would still remain. In other words, there would still be people who had given their minds in all seriousness to a certain problem of conduct and, in the end, differed crucially from their fellows, some of whom had also given *their* minds to it. In that case we commonly hold that the persons we call wrong-headed but honest fanatics are to be admired for doing what seems to them best, even if we are quite certain they are wrong. We admire them because we know that it is always hard to stick to a principle in the face of obloquy and derision, and because we believe such tenacity in an unpopular course to be of far greater moral worth (usually) than any easy swimming with the tide. It does not follow, however, that because we admire these people in certain important ways we therefore commend the whole of their action, or admit that they are right. On the contrary, we restrain them if we are convinced that their action is *very* mischievous. And if any such restraining action is justified upon our part, the manifest consequence is that we do not believe that everyone *ought* to do what seems to him probably best according to the best of his lights.

VI

As we shall see, these questions concerning belief raise further issues. Before dealing with these further issues, however, it seems necessary to refer to certain specific questions concerning the *voluntaristic* implications of "doing one's best."

In general, when we say that a man should do the best he can, the word "can" refers to his volitions. It is his will or his voluntary actions that are meant.

Indeed, according to certain moralists, the point is so plain that it is declared to result from the very meaning of the words we employ. For what, it is asked, is an *action* except a voluntary deed? Or what is meant by "controlling a situation" except the voluntary control of it? Such language, we are told, manifestly refers to what a man may choose or consciously try to do when, to employ the vernacular, he is "up against it."

On the score of words, at least, these statements seem mistaken.

An action, surely, is what a man *does*. It is the expression of his entire relevant agency; and unless it can be maintained that everything we ever do is, simply and solely, what we do *voluntarily*, it is clear that there may be a very palpable difference between our deeds (which in large part may even be unintended, although we are the authors of them), and either our *voluntary* deeds, or such part of our deeds as is voluntarily determined. Similar statements hold of "control." We may very well control a situation, in whole or in part, without knowing that we do so.

The crux of the argument at this point, therefore, concerns the human will. What, then, is the "will"?

Here the answer, I think, is very far from being clear. The human "will," while it is a convenient *name*, does not seem to designate an entirely unambiguous *fact*.

One thing that may be meant is express volition. When we consciously choose to initiate some action that we mean to perform we are said to "will" that action. The negative side of this is express conscious inhibition, that is to say, the express determination not to do something that we might very well have done had we not intentionally checked the impulse to do it.

A second, and much wider, sense of the term "will" refers not to what is intentionally chosen or consciously resolved upon, but to what is "voluntary." The term "voluntary" may also, perhaps, be understood in several different (if allied) senses, but, upon the whole, we may say that any action is voluntary if we *could* do it, or refrain from doing it, *if* we gave our minds to the matter. In this sense many of our voluntary actions need not be definitively willed. For we may be lazy or heedless, and so do many things that we would never have done had we considered them seriously, although we might quite well have considered them seriously if we had given a thought to the matter.

A third sense of "will" sometimes employed is wider than either of the foregoing. The "will," in this sense, expresses our whole activity, the marshalling of all our conscious forces. No doubt, in general, when we employ the word in this sense we usually convey at least an oblique reference to the supremacy of the intentional or voluntary marshalling of our psychic powers. This is the normal interpretation of what we call a settled determination. A strong-willed man, in ordinary language, is a determined man who sticks to his chosen resolutions in spite of difficulties, just as, contrariwise, an invertebrate man is one who forgets or abandons his intentional resolutions. Even so, however, conscious choice is only intermittent in any such settled determination, and the settled disposition that is referred to really is, for the most part, *only* a disposition, that is to say, it is not steadily and persistently before the mind, although, on

occasion, it is consciously reverted to. And it may be doubted whether, in all cases, we *could* revert to it in any significant sense, and so, despite certain differences, include it in the class of voluntary but not expressly willed actions (*i.e.* in our second class, although, for the whole of it, not in the first). In the largest sense, however, it seems clear that our "will" may be interpreted as a settled tendency, trend, or disposition, largely unconscious (or more than half opaque to introspection).

We have to allow, then, that the "will" is a somewhat ambiguous faculty; and consequently that references to it, however clear they may seem, permit of much that involves investigation. What has now to be shown is that these ambiguities and alternative possibilities have a substantial bearing upon "doing one's best."

Let us, then, consider the question in some of its more general and better-known aspects with special reference to the moral sphere.

The doctrine that "ought implies can" is beloved of all good Kantians, and is very relevant indeed to our present subject.

It is doubtful, in the first place, whether this principle can be said to be self-evident. At any rate, it has been denied in very influential quarters. *A debere ad posse*, Luther said, *non valet consequentia*. And most Christian theologians, indeed all of them who are not Pelagians, are compelled, at some point, to say the same thing. The moral law, they somewhere concede (or, like Paul and Augustine and Luther, they joyfully declare), commands us to do what, of ourselves, we cannot do; and therefore divine grace must be given us. *Gabe*, not *Aufgabe*, is the beginning and the end, although it is not always the middle, of such ethical doctrines.

Here, no doubt, there is much to be said. The fundamental contrast is between what the "old" or "natural" man cannot do, and what the "new" or "spiritual" man is enabled to do, although not of his own natural power; and it may well be contended that the terms of the contrast are fantastic, or at least dogma-ridden. May not the "natural" man, so-called, be only a theological abstraction, or an historical legend in a redemption-myth? Again, why should ethics destroy itself upon the razor-edge of theology? For theological reasons it is necessary to deny that a man can lay hold on spirituality of his own initiative (for Pelagianism is a heresy), although, for fear of quietism, fatalism, and the like, it is also imprudent to lay exclusive emphasis upon the way in which divine grace elects and lays hold upon its passive recipients. Why not, in a free ethic, abolish all these perplexities and argue only about what a *man* can do, not about what a "natural" man can do, or an "unregenerate" man before acceptance of the New Covenant?

Here, whatever the correct answer may be, it seems evident that Kant's answer was not correct. For Kant's principle is, in effect,

that no one ought to do what the *rational part of him* cannot effect through its pure rational agency, or, in other words, what he cannot effect *by mere rational volition.* And the rational will is *not* the whole man. The self-evidence of the principle that "ought implies can," therefore (if indeed it is somehow self-evident), does not imply its self-evidence in the form in which Kant expressed it.

Kant's paradoxical conclusions are notorious. He inferred that only "practical" love, and not, as he quaintly said, "pathological" love (*i.e.* emotional tender affection), could be commanded, and therefore that the Scripture must have meant that we ought to be beneficent to our neighbour, and could not have meant that we ought to feel sympathy or affection for our neighbour. For, said he, our emotions cannot be commanded by express rational volition; and therefore there is no sense in saying that we ought to feel the pure and tender ones.

The same argument would apply to what Kant should, in consistency, have called "pathological" purity of heart, or to "pathological" chastity. For these conditions of the soul cannot be summoned by express resolution. All that is immediately and expressly volitional is the inhibition of certain actions; and Kant expressly repudiated any more indirect and more subtle sense in which we might be said to have semi-voluntary control even over these emotions and states of the soul. Accordingly, it does not require much penetration to see that Kant's principle, as he interprets it, is thoroughly unscriptural.

That, perhaps, is no objection. I am not saying that Kant's doctrine is wrong because it is utterly and flagrantly unscriptural. I am only saying that, on the merits of this question, there is surely a great deal to be said for the Scriptural ethic (according to which many of the finer virtues are in large measure non-voluntary), and a great deal to be said against the forensic, Kantian view according to which nothing non-voluntary legitimately pertains to strict ethics at all. Are we bound to say that what the Scripture enjoins is nonsensical unless it is a condition of soul that we can attain by summary volition? To me at least it seems plain that the Scripture may be right, and that Kant is very likely to be wrong, in this important particular; and I mentioned the subject of free-will at the beginning of this paper with a certain proleptic intention.

In short, what a man does and becomes is not the same thing as what he does and becomes *by express volition.* It is also not the same thing as what he does or becomes through his "will" in either of the two other senses of the "will" that were discussed above (unless, indeed, the third sense is taken with so much latitude as to mean nothing at all significant).

Therefore, the best that a man can do need not coincide with the best he can do voluntarily or volitionally; and Bradley's principle

must be interpreted in a sense wider than the voluntary or volitional if it is true. If a man is likely to do better *without* trying than *by* trying, then he should not try. And ethics is impoverishing itself wrongfully if it imposes upon itself the very difficult restriction of confining its attention wholly to what can be shown to be purely a matter of "will."

VII

Any voluntary choice is determined by the agent's beliefs. Accordingly, if the maxim "ought implies can" is interpreted voluntaristically, it must be taken to imply that no one ought to do what he believes he cannot do. And this proposition is not at all obvious. It is true, no doubt, that it is psychologically absurd for any agent to will, or deliberately to choose, to do what he believes to be flatly impossible in his own case. We do not, in this fashion, voluntarily undertake what we are convinced is impossible. But what if our beliefs are mistaken? Might it not then be our duty to do what in fact we can do although we believe we cannot, or to avoid doing what in fact we cannot do, although we falsely believe we can do it?

These same considerations apply to doing one's (voluntary) best; and although they have been discussed, in part, in Section V of the present article, there are very good reasons for a further examination of this question. Let me quote from Dickens once again: "Seeing only is believing," he said, "very often isn't that; and even Being the thing falls a long way short of believing it."[1]

In general, writers on ethics appear to assume that we always know what we are and what we can do, and no doubt it is a fair assumption that most grown-up people do, in a rough way, know what they can usually do in regard to common actions in the commoner affairs of life. It does not follow, however, that most people know what harm they can do in affairs of delicacy, or that they are anywhere near to being infallible judges of what *are* affairs of delicacy. This is especially true in the case of social relationships—the sphere, after all, of the greater part of morals. Anyone who perceives the supreme difficulty of what is called "tact," and the way in which all human relationships are liable to an infinity of misunderstandings, can readily see what is meant by the difficulty. In the religion of the Manichees gentleness was the supreme virtue. Does anyone know, in all or in most human relationships, how to be gentle without being soft? And if he does not know, how can he tell what harm he may do with the rough and incautious edge of his tongue, or by his deficiency in imaginative sympathy? The hardest thing we can say about people, very often, is that they meant well, that is to say, that their beliefs concerning what they were doing were amiable but misjudging.

[1] *Op. cit.*, vol. ii. p. 5.

Another mistake that is frequently made is to the effect that if we err in this particular, we err, principally or always, on the side of overestimating our own capacities. This, if it were true, would be serious enough. The hardness and over-confidence of youth is natural to that fortunate condition; and we are all young in some respects until we are dead. For all of us the undertaking of a prolonged course of action may seem easy in the beginning, but who among us can gauge his tenacity in advance? Indeed, it may be argued with some plausibility that a certain degree of over-confidence is a necessity of the business of living. It is part of life's illusion that we nearly always expect better luck next time. Yet to say these things is in itself to admit that there are notable differences between our genuine capacities and our beliefs concerning our capacities.

As I have indicated, however, it is a mistake to suppose that any source of error which exists in this affair is one-sided. Diffidence and a sincere underestimate of our own capacities are perhaps not less frequent than over-confidence. They are certainly common enough. A lack of ambition, it is true, may sometimes be due to a preference—very often a wise preference even when it is juvenile—for a quiet life. But it may also be due to a definite underrating of our own capacities, or to a mistaken belief that other people can do better than we. It may seem a quaint piece of ethics to complain of a lack of push owing to an honest mistake concerning the amount of pushfulness that is in us; but the point is certainly relevant to the problem of making the best, or of making the most, of our circumstances. The ethics of vocation conflict with the ethics of humility; but the appearance of this conflict is no new thing.

Moreover, it seems very doubtful whether most of us are able, by taking thought, to form a correct voluntary estimate of our own capacities. To do so, we should have to be self-critical and yet not too self-critical; and the mean between these is not easy to find. Sometimes it takes a war, or the profound change of religious conversion, to show us what stuff we are made of; and it may always be argued that these profoundly disturbing events have changed us radically, with the consequence that, after them, we are new creatures made of a different stuff from our former selves.

VIII

The purpose of the present article has been to explore the meaning—or, rather, to be more accurate as well as more modest, to explore some of the salient implications—of the general injunction to do one's best in one's circumstances. As we have seen, it is a disputable matter whether this principle is, as Bradley suggested, the supreme principle of moral duty; and the present discussion (I

hope) has been free from any attempt to settle that major and perennial problem in moral theory. On the other hand, there can be no doubt whatsoever that the principle itself is very important for what we call prudence, good sense, wise living, and sane endeavour.

Accordingly, the discovery, if it be a discovery, and not, rather, a truism, that any concise formula like Bradley's may be developed along different lines, and is not entirely free from ambiguity, does not in any way detract from the importance of the principle, and should not be supposed to do so. Difficulties and even perplexities are bound to arise in any general statement which attempts to deal, with some precision, with an intricate subject. The important thing is to be able to face such difficulties with open eyes. The stupid course is to slur them over.

There appears to be a prevalent opinion that ethics, or at any rate the foundations of that subject, cannot really be very intricate, or require any great subtlety in their theory. In view of the complexity of human relationships, this prevalent opinion seems very odd indeed. Nevertheless, if the opinion be correct, and ethics is really a simple subject, we ought of course to rejoice. In that case, since the implications of doing one's best cannot be simple, it follows that the principle of doing one's best is only partially included in ethics if it is included at all. Such a view would work havoc with most of the traditional discussions of prudence, benevolence, and many other virtues. I am not suggesting that this consequence is, in itself, difficult to accept; but I am also not asserting that it should be accepted.

RIGHT AND GOOD:

ACTION *SUB RATIONE BONI*

PROFESSOR W. G. DE BURGH

I

"ALL men desire the good." This doctrine, which lay at the root of the ethics and also of a great part of the metaphysics of Greek and mediæval thinkers, is either a truism or a paradox, according to the interpretation we place upon it. Its meaning is far from obvious; it veils a multitude of implications and has given rise to a swarm of misconceptions. It has been assumed that all desire is *sub ratione boni*; nay more, the good has been defined as the object of universal desire, as "that at which all things aim." The view that desire is conditioned by prior apprehension of the good has provoked the rejoinder that desires precede consciousness of their end, that cognition is the result of, or at least concomitant with, the conative process which reveals it. Again, it may be asked whether the good desired is necessarily my own good, so that its attainment may be construed as self-realization; and, if so, whether it is private to myself or a common good which can be shared with others. Is heere one absolute Good, knowable by man, to which all other goods are relative? Is it possible to pass beyond what we opine and believe to be good, so as to know and desire what is "really" good?

Some at least of these problems must be touched on here.

(i) To the point first mentioned we have a clear answer. It has been the main object of these papers to show that action *sub ratione boni* is not the sole type of rational action, that reason directs man to will the right as well as the good, and that right and good are distinct notions. The proposition "All men desire the good" cannot be converted *simplicites* to mean that the good is the object of all desire. In moral action, we desire and will the right for its own sake; and, if we call such action "good," it is from the standpoint not of the agent but of the spectator. Both moral action and action *sub ratione boni* have practical value, but the values are specifically distinct.[1]

[1] A simple and definite term is needed to distinguish the theory of action *sub ratione boni* from Ethics, the theory of moral action. *Aretaics*, which is used by John Grote for the science of virtue as distinct from duty, is too narrow for our purpose; virtuous action being only one form of action *sub ratione boni*. Unless its meaning be unnaturally stretched, it excludes the pursuit of truth and beauty. *Eudæmonics* is the best term I can think of,

That the Greeks and those who followed them failed to grasp the distinction was due to their one-sided, though praiseworthy, exaggeration of the claims of the theoretic life. They could not conceive an act as rational, unless a reason could be given for it other than the act itself. Such a reason could only be the end or good for the sake of which the act was done. Hence they were unable to give an adequate explanation of the admitted fact of moral evil. Vice was necessarily interpreted as ignorance, as defect in theoretical apprehension of good. Since all desire was of good, it was impossible for a man voluntarily, *i.e.* with his eyes open to the light, to choose the bad. Now of action *sub ratione boni* this is manifestly true. Choice of evil is choice of a really lesser good, which through lack of insight appears the greater, in preference to a really greater good. No one wills the bad knowing it to be bad. The bad indeed is non-existent, being mere privation of good; and therefore it cannot, as such, be cognized or willed. But men do habitually will the *wrong*, knowing it to be wrong. Immorality is not ignorance but rebellion against the moral law. Its source lies not in lack of knowledge, but in lack of self-control, in the overmastering of right desire by evil passion. The blinding influence of passion may obscure the vision of the good, but the voice of duty sounds above the tumult, and, when we disobey its dictate, we know that what we do is wrong. Indeed, the power of evil in the soul is even more directly practical than the concurrent desire to do the right. "I know not how it is," wrote St. Augustine, "but an object of desire becomes more seductive when it is forbidden."[1] St. Paul's record of his own experience is here decisive. "The good that I would, I do not; the evil that I would not, that I do." The Epistle to the Romans is conclusive refutation of the theory which reduces moral evil to mere privation and denies the existence of any desire other than the desire of good.[2]

so long as *εὐδαιμονία* is freed from association either with *ἡδονή* (pleasure) or with (felicity) self-realization as the ultimate Good. The difficulty arises from the fact that the distinction between the two types of action was never clearly grasped before Kant.

[1] See the discussion on his youthful robbing of the pear-tree, *Conf.* ii. 4 ff. The sin here was sheer rebellion; there was no advantage desired or gained in the act. Hence this seemingly trivial incident becomes significant for Augustine of the essential nature of sin as sin, and accordingly receives lengthy treatment in the *Confessions*.

[2] *Rom.* vii. 19. The "good" here is the law of righteousness, rebellion against which is provoked by the opposing (positive) "law of sin." The context shows that St. Paul is thinking of something very different from action *sub ratione boni* or from evil as defect of good. On the religious (as distinct from the moral) plane, the conflict is overcome and evil loses its positive reality; see *Rom.* viii, esp. 31 ff. But such a solution lies outside the scope of ethics. Reference will be made to it in the concluding article.

(ii) Confining attention to action *sub ratione boni*, we ask next whether cognition of the end necessarily, as the Greeks supposed, precedes the desire. The scholastic philosophers, and notably St. Thomas Aquinas, discussed the psychology of this position with rare subtlety of analysis. The will, they held, selects freely among practical judgments formed and reflected upon by the intellect, judgments as to the relative goodness or badness of alternative courses of action. This doctrine, that practical judgments of the intellect precede volitional choice, has been directly opposed by Croce, who insists that, so far from being antecedent, they are always consequent upon volition. I first choose and then pronounce the object I have chosen to be good.[1] The question at issue as to which comes first, the cognition chick or the conative egg, can be answered by a discrimination. It is obvious that in their origin desires precede the consciousness of the ends in which they find satisfaction. The baby's first hunger is prior to the baby's first meal. As Professor Alexander has argued, it is the conative process which discloses to cognition the nature of the object it blindly seeks. But on the plane of rational conduct, with which alone we are here concerned, it is surely otherwise. Here the chick precedes and conditions the egg. Two qualifications are however necessary. Apprehension of the desired good may vary almost indefinitely in clearness and precision, from the relatively determinate forecast of a tour on the Continent or a measure to be introduced in Parliament to the relatively schematic and indeterminate aspiration for the promotion of social welfare or scientific research or the Kingdom of God. Indeed, as Croce has pointed out, indetermination inevitably haunts our consciousness of the future; action is always, though in varying measure, in the dark. Secondly, while in studying rational action it is the moment of clear insight which naturally arrests attention, there may be implicit in the desire more than the desiring subject has explicitly before the mind. Men can desire better than they know. Of this the great mediæval thinkers were well aware. They held—and we shall return to their view presently—that desire for the absolute Good is implicit in man's nature, conditioning, dimly as he may be conscious of it, every step in his pursuit of relative and finite goods.

(iii) The Good cannot be *defined* in terms of desire as "that at which all things aim." Even if it should prove that the absolute Good were the goal of all desire for all creation "travailing together in pain" towards it "until now," this fact, for all its significance, could not be what constitutes its goodness.[2] It would be at most a

[1] Croce: *Philosophy of the Practical* (E.T.), Part I. Sect. I. c. 3; cf. also Alexander: *Space, Time, and Deity*, vol. ii. pp. 118 ff. 31 ff.

[2] On the whole question of the definition of good as "object of desire or interest" and the dependence of good on "desire," see Ross: *The Right and the Good*, chap. iv, pp. 80 ff.

property, not the essence, of the good. On the more modest level of thought befitting the student of ethics, we cannot say that to be desired or to satisfy desire entitles a thing to be called good. There are bad desires, and, if they are satisfied, the fact of their satisfaction makes bad worse.[1] Can we say, then, that good means not simply what is desired or what satisfies, but what is ideally desirable, the end in which all desires find harmonious satisfaction? Is not this palpably to argue in a circle? What is ideally desirable means what it is good to desire, and the desires thus harmoniously satisfied are just the desires which are good.[2] Evil desires are excluded *ex hypothesi*, as is also the moral desire, the desire to do what is *right*, which, as we have shown, is irreducible to desire of good. Nor can the goodness of that which satisfies lie in the mere fact of satisfaction. If it did, the good would be private to its possessor, and would lose all claim to objectivity, *i.e.* it would not be good at all. This ambiguity between the desire for an objective good and the desire for the possession of it is admirably elucidated by Descartes in a letter to the Princess Elizabeth: "*Il y a de la différence,*" he writes, "*entre la béatitude, le souverain bien, et la dernière fin ou le but auquel doivent tendre nos actions: car la béatitude n'est pas le souverain bien; mais elle le présuppose, et elle est le contentement ou la satisfaction d'esprit qui vient de ce qu'on la possède. Mais, par la fin de nos actions, on peut entendre l'un et l'autre; car le souverain bien est sans doute la chose que nous nous devons proposer pour but en toutes nos actions, et le contentement d'esprit qui en revient, étant l'attrait qui fait que nous le recherchons, est aussi en bon droit nommé notre fin.*"[3] In the possession of the good desire is quieted in enjoyment, *praxis* in *theôria*; but the fruition lies in the vision of a goodness which is independent of its relation to the enjoying subject. The good is not good because it satisfies; it satisfies because it is the good.

(iv) We are brought here to the problem of the objectivity of the good. Good, like right, is a predicate expressive of a practical ideal or standard of conduct. A thing is judged good by an act of reason, and the judgment claims universal validity. Hence the idea of a good which is merely private to the individual desiring it is, for all

[1] If it be objected that the bad desire is desire for a lesser *good*, it remains true that the fact of the illusion by which the lesser good appears the greater is itself evil.

[2] Not "what *ought* to be desired," for this would make goodness dependent on rightness.

[3] Letter of August 18, 1645, Adam and Tannery, iv. 275 (quoted by Gilson in his *Commentaire* on Descartes' *Discourse*, p. 255). Cf. Aquinas, *Sum. Th.* I^a–II^{ae}, 2. 7. *ad. Resp*, "beatitudo est aliquid animæ; sed id in quo consistit beatitudo, est aliquid extra animam." Of course Descartes accepts the traditional doctrine that all action is *sub ratione boni* (see letter to Mersenne, A. and T. I. 366).

its frequency in popular and even in philosophical discourse, a contradiction in terms.[1] It is with goodness as with truth. We can speak with meaning of private pleasure, private interest, private advantage, as of private tastes or personal opinions; but never of private truth or private good. Hence desire of good does not imply of necessity, as Professor Prichard and even Bradley take it to imply, desire of good for self.[2] Action *sub ratione boni* cannot therefore be brought under the rubric of self-realization. That the self is in effect realized, in varying measure, in the life directed towards the good is no proof that this realization enters into the end desired. The good I strive for may be one in which I can have no share, as when I aim at the welfare of my family or my country after, or even through, my death. Nor need the desire of ultimate good imply participation by the self in its attainment. The final goal may even be conceived as precluding any such determinate experience, as the sheer negation of consciousness and individuality. Western thought, it is true, finds such a conception theoretically paradoxical and practically repellent. For Christian mystics, as well as for monistic philosophers like Spinoza, the ideal is a state of positive beatitude, in which individuality, far from being annulled, attains its full perfection in union with God. But the East has travelled on a different path; and the mind of Indian thinkers has ever been haunted by the conviction that individuality, and even otherness, bears the mark of evil, and that its survival, however it be transfigured, would cast an intolerable blemish on the state of ideal consummation. Certain Buddhist schools, for example, have interpreted *nirvāna* as not merely cessation of individual existence, but as total nullity of being (*śūnyatā*).[3] A similar, if less extreme, view of the state of emancipation (*moksa*) is found among the Vedantist teachers. In face of the fact that such conceptions have been cherished by many of the profoundest Eastern thinkers, we cannot, on the score of our inability to appreciate their value, rule them out of account in our inquiry into the good. Another corollary which follows from the objectivity of the standard of goodness is that desire for pleasure

[1] See Moore: *Principia Ethica*, § 59.

[2] For self, that is to say, as well as for others. Of course every desire is the desire *of* the individual who desires, but this is a trivial statement. The question is what the desire is *for*.

[3] Cf. Questions of King Milinda, iii. 5. 10: "The Blessed One passed away by that kind of passing away in which no root remains for the formation of another individual. The Blessed One has come to an end, and it cannot be pointed out of him that he is here or there." For the Mādhyamaka school of Buddhists, *nirvāna* is neither a positive state of being nor a negative state of non-being; even the knowledge that phenomena have ceased to appear is absent; bondage, liberation, and Buddha himself are phenomenal. Parallels might also be found in Persian Sufism.

cannot be reckoned as desire for good. Pleasure is private to the subject who experiences it. Desire for the general pleasure, be it noted, is no more desire for pleasure than the desire that our country should possess riches is covetousness or the desire of wealth.

(v) The judgment "this is good" moves to action, when the apprehended good is within our power to attain. But can its claim to objectivity be sustained? How can we be assured that what we judge to be good is real, and not merely apparent, good? The same problem confronts us as in the case of "right." Our judgments are manifestly fallible; are we not doomed, in our quest for what is really good, to be for ever deluded by the semblance? The answer will be the same as in the case of "right"; the form of the good can be realized only in and through particular goods, each and all of which fall short of the perfection which is throughout the goal of our endeavour. These two things at least are clear: (*a*) that the ideal form is no subjective fantasy; and (*b*) that only by holding it steadily before our eyes as a standard is it possible to bring the relative and finite goods into being by our will. Just as particular concrete duties are willed as expressions of duty universal, so particular concrete goods are willed as expressions of universal good. This implication of volition *sub ratione boni* has been set forth, in reasoning unsurpassed for clarity and cogency, in the writings of St. Thomas Aquinas. In this sense, all that a man desires—when he desires, be it understood, *sub ratione boni*—he desires on account of the ultimate end. There is in man, as a rational being, a natural desire which can only find satisfaction in an infinite and perfect good. Here, again, the impulse of the intellect towards truth affords a parallel. The human mind is driven onwards, by a natural craving, from finite truth to finite truth; nor can it rest, so long as the remotest fragment of the universe remains veiled to its comprehension. Though each advancing step in the path of knowledge brings with it a more poignant realization of what lies beyond, though "leagues beyond those leagues, there is more sea," the advance has been conditioned by the unquenchable faith of reason in a truth that is absolute and complete. So, too, the artist's desire to create beauty is inspired by the vision, clouded and partial, of beauty absolute, a beauty that leaves nothing to be desired of it. In these specific forms of the life *sub ratione boni*, and in others—in the love that seeks its own consummation (*amare amabam*) or in the desire of religion for union with God in love and worship—the apparent goods cease to be merely apparent and become real, when informed by the desire of reason for absolute good.

The truth of this implication will be evident, if we follow the method pursued in our discussion of the moral consciousness and indicate the logical stages in the development of the consciousness of good.

II

In action *sub ratione boni,* the good is theoretically apprehended prior to the action, for which it provides the efficient motive; and the action is willed for the sake of fruition or rest in the good, as its final cause. Thus the distinction between speculative and practical activities is irrelevant for our present purpose; both alike fall under the head of action for the good. The pursuit of knowledge calls volition into play as much as does the pursuit of moral goodness or of virtue; truth, beauty, and goodness of character are all, in their several ways, judged good, and as such are capable of stimulating and satisfying desire. We shall, therefore, refer to man's intellectual or æsthetic activities among our illustrations of the life *sub ratione boni.*

(i) In our survey of moral action, we noted that the situation of fact habitually provokes to efforts after adjustment, unattended by any consciousness of moral obligation. Such actions are called right or wrong, in a wider and non-moral usage of those terms, with reference to a standard of mere practical efficiency. Similarly, on the line of action *sub ratione boni,* a form of action can be distinguished which is logically prior to the consciousness of good. Man's environment presents objects which tally with his natural impulses by holding out to them the promise of satisfaction. The dominant feature in these experiences is not effort under external compulsion, but spontaneity of desire. "The world," in Ancient Pistol's phrase, "is mine oyster"; it clamours to be explored, revealing itself as alluring and delightful, not as a stern taskmaster, but as a kindly friend. The interest aroused is theoretical as well as practical; curiosity is excited, and a child finds pleasure in following the movements of a cat or in watching "the wheels go round." The current craving to see the pictures is but a crude instance of the speculative desire, which, on a higher level, bears fruit in scientific or historical research. This difference of levels is all-important. Plato gave classical expression to it when, in the fifth book of the *Republic,*[1] he discriminated, among lovers of *theôria* or contemplation, between those whose interest was exclusively limited to the spectacle of sensible events—the lovers of sights and sounds—and the philosopher, who rises from *theôria* of the ever-changing sensuous show to that of eternal and intelligible truth. He, and he alone, is a lover of the *good.* But the levels are not discontinuous; the interest of reason springs, as Plato also pointed out, from that of sense.[2] So, though the pleasant is not, quâ pleasant, good; yet what gives subjective satisfaction has potentiality of objectivity and goodness, and may

[1] *Rep.,* 475D—480A. [2] *Rep.,* 523A—525E.

therefore be regarded as on the line towards good. The moment of transition is indicated by the use of reason as "the slave of the passions," as in Rational Hedonism, where pleasures are measured one against the other, and the means to their attainment are determined by rational calculation. Another example of reasoned egoism is the theory of life put forward by Callicles in Plato's *Gorgias*, a a theory common to every age of developed civilization, which advocates self-assertion and the enslavement of society to the will of the strong. When, however, as in Plato's picture of the timocratic state,[1] the power aimed at is the public power of the community, national aggrandizement and glory, as also when the object of desire is the general happiness, the passage has already been effected to the recognition of an objective, though finite, good.[2]

(ii) As duty can only be willed by willing particular duties, so good can only be desired as embodied in particular goods. And as no particular duty or series of particular duties can fulfil the requirements of duty, so no particular good or series of goods can fulfil the requirements of goodness. No finite good, taken in its finitude, can justify the claim to be *the* good. Just in so far as they make this claim and are desired as absolute ends, they are bound in the course of life to reveal their inadequacy alike to theoretical analysis and to practical experience. The concept of good, like that of right, transcends finite expression. A distinction must here be drawn, among such specific goods, between (*a*) those which are not merely incomplete as failing to cover the whole field of goodness, but are further bound down by limitation to a finite set of spatio-temporal happenings; and (*b*) those which, though free from this last-mentioned restriction, yet stand side by side with other forms of goodness. Examples of the former type are the economic prosperity or power of a given social group, be it family or tribe or nation, or even humanity at large.[3] The ideal of Utilitarianism, or, as it is better termed, Universalistic Hedonism, falls obviously under this head. Such goods as these are easily proved to be defective in the course of experience; they are indefinitely variable and transitory, and what satisfies the needs of one race or generation fails to satisfy the next. Goods of the second type have a stronger title to be regarded as ultimate; for, though they are still bounded by one another, they are each in

[1] *Rep.*, 547B—548C.

[2] There is no suggestion here that self-assertion is temporally prior to social co-operation. The point is that conscious reflection, on the part of an intrinsically social being, begins with self-assertive revolt against social restraints. This truth is implicit in the Jahvist's version of the story of the Fall in *Genesis* iii, as Hegel realized (*Logic*, E. T. Wallace, pp. 54–57).

[3] On the concept of "humanity," see Bradley—*Ethical Studies*, pp. 205, 231–2, 343–45. Bradley distinguishes its relevance for religion from its relevance (or irrelevance) for morality.

suo genere infinite.[1] Such are knowledge, beauty, moral perfection, love of our fellows, and, if we include religious good, God and the reciprocal love of God and man.[2] Each of these goods is infinite, in that it provokes and responds to a desire for a specific perfection, which no finite achievement can fully satisfy. Yet each is a distinct form of goodness, exclusive of the rest. Each, again, can be desired under limitations which, when thought out, are found to contradict the nature of the good in question. Consider the desire of the intellect for truth. The fact of its implicit infinitude, in that it of necessity persists unsatisfied with any attainment short of the possession of the final truth of all that is, was selected by Aquinas as the foundation-stone of his argument to the need of revelation and immortality as conditions of the possibility of its satisfaction. Yet the *summum bonum* cannot be contracted within the bounds even of final truth. Such contraction would prove defective to the intellect itself. It seems to be a paradox of the intellect, that it cannot rest satisfied in what satisfies the intellect alone. It demands that beauty, moral perfection, and love should be synthesized with truth in the ideal of perfect goodness. Of the possibility of such a synthesis we shall have something to say in the concluding paper of this series. Our immediate point is that truth is normally pursued in actual human experience without the explicit awareness of its infinitude. The specialist, intent on a particular inquiry, will often affirm principles, say, of materialism or physical determinism, which have a restricted or purely methodological application, as though they were laws holding of all experience. So, again, the search for truth may be subordinated to finite practical ends such as the promotion of an industry or the interests of national defence. The like is true of the artist, when he imposes rigid canons, e.g. of dramatic unity, on the expression of the ideal of beauty, which evidence their incompatibility with the ideal by provoking other artists to overthrow them. The love of our fellows, seeking particular means of expression for a good that in its universality defies restriction to any finite states of character or groups of persons, suffers unnatural contraction when devotion is confined to a single individual or family or class (*égoisme à deux, à trois*, etc., and the idealization of class-consciousness). Finally, in religious history, polytheism and monolatry prevail long before the recognition of God's infinity, and still persist in men's religious

[1] On the use of the term "infinite" I follow Bradley—*Ethical Studies*, pp. 74–78. I am well aware that mathematicians refuse to admit the term in any sense save that in which it is defined in mathematics. But I can appeal to a noble array of philosophers in declining to submit to this restriction.

[2] On religious experience, see the next paper. I hold that the religious life can be distinguished alike from the moral life and from the life *sub ratione boni*, though it presents close affinities with the latter.

thought and worship beneath a veil of avowed monotheism. It is hard for the human spirit, in its secular striving for the good, to shake off the trammels of the finite.

(iii) That finite goods fail to satisfy is a truism, voiced all along the ages not only by saints and mystics but by the man in the street. "*Il n'y pas d'âme tant soit peu noble,*" wrote Descartes in the Preface to his *Principles*, "*qui demeure si fort attachée aux objets des sens, qu'elle ne s'en détourne quelquefois pour souhaiter quelque autre plus grand bien, nonobstant qu'elle ignore souvent en quoi il consiste. Ceux que la fortune favorise le plus, qui ont abondance de santé, d'honneurs, de richesses, ne sont pas plus exempts de ce désir que les autres; au contraire, je me persuade que ce sont eux qui soupirent avec le plus d'ardeur après un autre bien, plus souverain que ceux qu'ils possèdent.*" A generation later Spinoza told, in his unfinished treatise on logical method, how early in life he had weighed the goods in which the generality of men seek happiness—pleasure, riches, honour—and had found them wanting; and how love of an object that is infinite and eternal (*amor erga rem infinitam et æternam*) alone could bring enduring and complete felicity.[1] "To find or to be able to find a thing here is to prove that it cannot be the good."[2] Parted in all else by a chasm, the mind and heart of East and West are here at one. "All that is clung to falls short," said the Buddha; and he declared, as the second "noble truth" of his doctrine, that the origin of suffering lay in "the craving thirst that causes the renewal of becomings, that is accompanied by sensuous delights, and seeks satisfaction, now here, now there." It fell to the philosophers to display the logic of this transition from the pursuit of finite goods to that of a good which is transcendent, by unfolding the implications both of the good as an objective reality and of the desire of the good inherent in man's rational nature. The former path was followed by Spinoza in his *Ethics*, the latter by Plato in the fifth book of the *Republic*.[3] He shows there, by analysis of the principle of desire or love, that the hall-mark of all love, irrespective of its specific type of object, is universality. Whatever is desired with single-minded direction is desired in its entirety. In the case of all finite objects, such desire entails self-contradiction. One object alone can be loved whole-heartedly without breach of harmony, the essential Form of Good, the one all-inclusive Good from which fragmentary and finite goods draw their goodness by participation, and apart from which their value is appearance, not reality.

[1] *Tractatus de Intellectus Emendatione, ad init.*

[2] Karl Barth, *The Word of God and the Word of Man* (E.T.). pp. 137–8; cf. pp. 138–9.

[3] *Rep.*, 474C—475C.

III

Action for the good, like moral action, is thus seen to imply an absolute standard; in the one case an absolute Good, in the other an absolute Right. Whether the standard be an other-worldly reality, transcendent in relation to the world of spatio-temporal experience, as Plato and Plotinus held; or whether it be, in Kant's phrase, a "regulative idea" for our knowledge of the world we live in, the idea of that world in its totality as an immanent Absolute, it is not for Ethics to decide. The issue can only be determined, if at all, on the *terrain* of metaphysics or (and) of religion. But, on the borderline that parts ethics from these wider fields of inquiry, the problem arises in the form of an antinomy. We have noted this already in the case of the ideal of Right. In the case of Good, the absolute Good, which is the *prius* of all finite goods and the source of their relative worth, is nowhere realizable within human experience. In the light of the perfect standard, the kingdoms of the world and the glory of them suffer remorseless condemnation. But if the Good be merely an ideal, how can it be practical? To be practical, it must be both realizable and real. Men are not moved to action by desire of a perfection which is either unattainable or a fiction of the imagination. Consider, for example, the good under the form of truth. Not a step could have been taken on the path of knowledge, save for purely practical purposes, but for the unquenchable faith of the intellect in a truth that is wholly and completely true, and is knowable by the human mind. Yet the goal is palpably unattainable, by reason of the finitude alike of the actual knowing subject and of the actual objects known. The knower apprehends by discursive and inferential processes, which, though they are illuminated at every turn by intuition, preclude immediate intellectual vision of the truth[1]; and the world he strives to know, including his own self, comes to him as an unfinished and fragmentary series of particular occurrences, which defy reduction to a unitary and coherent system. So, in human affection, the ideal of perfect union with our kind is but imperfectly realizable through the love of a few by each, and of these few with varying grades of intensity. At best, individual divergencies and contrasts remain unsynthesized into a real identity of differents. We are thus both infinite and finite, potentially infinite and actually finite; finite but too manifestly, as limiting and limited by persons and things that are related to us externally and make us what we are by the external relationships; infinite, in that we are

[1] See Professor A. E. Taylor, *Knowing and Believing* (Presidential Address to Aristotelian Society, 1928), esp. pp. 19 ff.; and my article on *Logic and Faith* (*Journ. of Phil. Studies*, October 1926).

conscious of our infinitude and transcend it ideally in cognition and desire.[1] It is only through this consciousness on the side of the subject that we can conceive in idea, as the ultimate ground of rationality in the object, an Absolute which is either transcendent of the spatio-temporal world or that world itself as a self-explanatory system. How this ideal can be unrealized and yet real is a problem which Ethics asks and cannot answer. Its consideration raises metaphysical questions of almost insuperable difficulty, touching the reality of evil and the relation between fact and value, the actual and the ideal; questions that lie beyond the scope of these papers.[2] Enough has been said to show that the science of Ethics, even when taken in its widest extension to cover not only moral action but action directed to the good, is not self-contained or final, but, like all other departmental inquiries, gives rise to problems that require a systematic philosophy of experience for their solution.

Waiving this larger issue of the antinomy, there remain two or three matters on which something must be said before we close. We have to consider how, within the field of conduct, the two types or moral action and action for the good, which have been sharply distinguished in the abstract, intermingle with one another in the concrete life of man. Again—and here we touch the border-line between ethics and another enquiry—we must ask how far religious experience can be subsumed under one or other of the aforementioned types of action, and, if it be found to be distinct, how far these types of action enter into and modify religion. Reference must also be made to a problem which has been pressing on us throughout the whole preceding discussion, that of the plurality of values. Are the distinctions of Right and Good, and of the several forms of Good (truth, beauty, love, etc.), irreducible and ultimate? Reason surely rebels against such a severance. Where, if anywhere, are we to look for a principle of synthesis?

(To be concluded.)

Note.

This article was written before the appearance of Dr. Ross' book entitled *The Right and the Good* (Clarendon Press). I would refer the

[1] See Bradley, *Ethical Studies*, pp. 74 ff.

[2] The Good must be real, yet evil is a positive fact; and, over and above positive evils, defect of good is everywhere to be found in the world of finite experience. For ethics the ideal value remains unrealized, an ideal over against fact. This severance of fact and value is overcome in different ways, both by religion and by metaphysics. But for moral experience, and also for action *sub ratione boni*, the severance presents an unsolved and insoluble antinomy. See *Ethical Studies*, "Concluding Remarks," esp. pp. 313, 322, 326.

reader to his admirably lucid analysis of the various meanings of "good" in chap. iii of that work, and especially to his discussion and definition of what is "intrinsically good" as "that which is good apart from any of the results it produces" (p. 68). I agree with him (*a*) in holding goodness to be a "consequential quality" of the object which is good, and not a relation either between constituents of the object or between the object and the mind which apprehends it (chap. iv); (*b*) in holding that the objects qualified as intrinsically good are states of mind (chap. v). The metaphysical and religious problems of an Absolute Good and of God as good lie outside Dr. Ross' inquiry. The most serious difference between us is on the all-important question of the inclusion of motive in the content of duty; his exclusion of motive (pp. 4–6) carries with it far-reaching consequences, *e.g.* the distinction of "right" from "morally good" acts (p. 156), and the denial of intrinsic value to "right" acts (pp. 132–133). My own view on this question has been stated in an earlier article (No. 19, July 1930).

PHILOSOPHICAL SURVEY

PHILOSOPHY IN FRANCE

THERE are at least six works of the very first rank which no review of recent philosophy in France, or in Europe, should neglect to notice. Such are the important lectures given at the Collège de France by Professor Edouard Le Roy, who occupies the chair vacated by Bergson on his retirement, and the three volumes of studies on Cournot and Renouvier by MM. Milhaud and Hamelin, posthumously published. To these I intend to devote separate articles in future numbers of the *Journal*. And, apart from these, there is indeed no lack of careful and stimulating work.

I

M. JEAN WAHL has attracted much attention by his last book on *Distress of the Spirit in the Philosophy of Hegel*,[1] a study of the formation of Hegelianism from an unfamiliar angle. M. Wahl is persuaded that a purely 'intellectualist' exposition of Hegel is like the play of *Hamlet* with the Prince left out. Hegel's philosophy, he says, "cannot be reduced to a few logical formulæ. Or rather, these formulæ cover over something that is not of purely logical origin. The Dialectic, before being a method, is an *experience* by which Hegel passes from one idea to another." And it is a specifically *religious* experience—"behind the philosopher we find the theologian, behind the rationalist the romantic." This experience, intensest in Hegel's early manhood, is the real origin of his philosophy. But it is not, as M. Wahl's whole book attempts to show, the "origin" in the merely psychological sense—of that which directed Hegel's interest and efforts to the study of speculative metaphysics. It is "the origin" in a profounder sense, one in which the metaphysical conclusions Hegel reached in maturity must themselves be turned back upon, used to interpret and evaluate, the very experience which is at once their historical source and the essential material they have to exhibit as harmonious and rational. Concerning what is the proper business of philosophy, M. Wahl would presumably fall into line with writers like Professor A. E. Taylor, when they say that it is "to express a whole personality." Now the experience, the interpretation of it, and the "whole personality" in the present case, though those of the historical Hegel, are yet not of particular biographical import alone. The experience *vécue* is, of course, particular and biographical, but the content of that experience, what is so richly significant in it, reaches beyond the particular limitations of occasion, state, and person. The outcome of Hegel's philosophy was "to remove, in the non-temporal whole in which rationality and reality are finally united, whatever is discordant and tragic in the world of concrete experience." Now the "experience" in question is essentially one of contradictions. Hegel is incessantly confronted with antinomies and antitheses, and arrives by a struggle, which is "an echo of the universal labour of the negative," at a synthesis of those contradictions. In this "biographical" struggle of Hegel we have 'writ small,' the long history of human experience, the alternation of endeavour with despair. In this way Hegel raises to the

[1] J. WAHL: *Le Malheur de la Conscience dans la Philosophie de Hegel*. Paris: Les Editions Rieder. 1929. Pp. 268. 40 fr.

level of an historical description of all human experience, next to the level of a metaphysical principle, the distress of separation and reflection on its antitheses, on the one hand, and the need for harmony and the idea of the Notion, on the other. "The conception which marks the introduction of apologetic theology into the history which itself becomes a logic, is that of spiritual distress." This "division within the soul itself" in its separation from God, an experience primarily Christian, has a cosmic significance. Figuratively, it is described as "the Universe becoming aware of itself." Distress of spirit in man, repulsing the harmonizing efforts of reason, is symptomatic of disequilibrium or "distress" at the heart of Being itself.

Hegelian philosophy is first and foremost a Meditation. This meditation, starting from the fact of spiritual suffering, facilitates by conscious effort a transcendence from all involved in that initial experience. But the internal contradiction, the "perpetual irony," of all thinking (*viz.*, that every affirmation of spirit entails a contrary affirmation) serves to point the direction that thought should take "so as to fill up the blank that separates reason taken as reality from reason taken as spirit." The validity of a notion is to be established only *en s'approfondissant*, and it can *s'approfondir* only *en englobant son contraire*. The progressive movement of spirit is not then one of opposition or of incessant oscillation, but a movement of cyclical synthesis "enriched by all the intermediate stages from its starting-point." Without spiritual distress there is no movement or life, and even when surmounted, it cannot be denied or suppressed in some changeless reality. The reality for which Hegel is seeking is not the undifferentiated 'One' of antiquity; his philosophy is to be that of "a romantic classicism," or "a classical romanticism," for he is trying "to make arise out of the deepest distress of spirit its highest happiness," and this happiness is possible only in a movement which has eternally surmounted distress. *La conscience malheureuse*, "that simple negativity of spirit which becomes self-conscious," compels us to pursue a path that leads into deeper and deeper distress. Progressively wider become the "divisions" between self, the world and God, and these "separations" are objectively manifested throughout the whole history of human experience and thought—Stoicism, Judaïsm, Primitive Christianity, Mediæval Christianity, eighteenth-century Subjectivism, are milestones in that history. "Philosophy" is thus philosophy of the history of spiritual struggle, inspired by it, explanatory of it, liberating the human soul from it through the happiness born of it. M. Wahl is a skilful writer and able to throw into fine relief the literary richness of his theme. True, we do not find in his book the method or the cosmology of Hegel dissected, clarified, and meticulously reassembled with McTaggart's skill, but then it is not M. Wahl's purpose to do this. As an account of where the "accent" should properly fall in Hegelianism, we may feel M. Wahl unconvincing, but that he succeeds in presenting the most illuminating parallels between the development of the metaphysic or articulation of the Notion, on the one side, and the interpretation of "History" in Hegel's sense, on the other, is beyond question.

A metaphysical study of a very different cast is that of Dr. RÉGIS JOLIVET of Lyons, on the necessity of the conception of substance for metaphysics. His book[1] is historical and critical, but "historical" here does not indicate a mere meander through the writings of past metaphysicians. Dr. Jolivet does not lose his reader in a morass of citations, but adroitly guides him straight to

[1] RÉGIS JOLIVET: *La Notion de Substance: Essai historique et critique sur le Développement des doctrines d'Aristote à nos jours*. Bibliothèque des Archives de Philosophie. Paris: Beauchesne. 1929. Pp. 335. 50 fr.

the high places and strategical points. His fairness and sympathy with "empiricism" and with philosophies denying ontological status to "substance," enable him to state their implications in the fullest and strongest manner, which is, for him, precisely to show up their insufficiency and weakness. Limiting his review to those systems which brought new solutions to difficulties arising from the notion of substance, Dr. Jolivet tries to show how substance is ineluctably presupposed in them all, and that the attempts of some of them to elude it account for the final impotence of empiricism, and the insurmountable objections to certain forms of idealism. This thesis he tries to support, positively by Aristotle, St. Thomas, Suarez, Descartes, and Leibniz; negatively, by Hume, Kant, and less directly by Lachelier and Hamelin. The discussion of Cartesianism is pleasingly free from any Kantian 'twist,' and the first half is particularly good, though the criticism Dr. Jolivet uses in the second half 'to support his view that Descartes' doctrine of substance compromises the possibility of a thoroughgoing realist interpretation of it' seems to me untenable. (It is startling, too, to find in so good a discussion the suggestion that by "clear and distinct conception" Descartes means "an *image* that is definite"!—p. 140). The Cartesian *Cogito* and Bergson's *durée concrète* alike presuppose at the outset a realism which neither is in the end able to justify, because, according to M. Jolivet, of empiricist prejudices. A more thoroughgoing realist interpretation of substance is to be worked out by starting from Aristotle (his account in itself is inadequate, since it eventually leaves the material individual unintelligible), correcting him by St. Thomas, and developing the revised version along Leibniz's lines. The author shows well how Thomas reinforces Aristotle's "realism" of substances by a realist theory about our knowledge of them. Intelligible and sensible factors in the object of knowledge are distinguishable but not separate factors in the concrete thing—they are co-implicant factors in it. Since the intelligible is immanent in the sensible, the sensible is already "rational"; and since the sensible is immanent in the intelligible, the intelligible concrete is sensible. In his concluding chapter Dr. Jolivet maintains, endorsing Maine de Biran, that the divergences and errors of metaphysical systems result from their all having exceeded the limits warranted by primitive fact through either illegitimate abstraction or insufficient analysis. Metaphysics must therefore return to primitive facts and ascertain their character. These, Dr. Jolivet decides, are two: the first, fully brought to light by Descartes, is the existence of a substantival self; the second, that phenomena and substances are unseparated in the concrete, and jointly constitute the 'existence' presented in awareness. As interconnected, "obeying" definite laws, phenomena are objective, independent of minds, and hence already syntheses that are far more than "pure appearances." And substance, since it is intrinsic to its phenomenon, is not a "pure absolute," and therefore can be directly apprehended in sense-perception. Dr. Jolivet has certainly produced a careful, thoughtful, and suggestive book, which, to say the least, contains the essentials of a sufficient answer to Phenomenalism.

The *Société Belge de Philosophie* has recently made its *début* in print with the publication of two *Archives*, both of logical interest. Professor DUPRÉEL investigates the notion of Necessity.[1] Philosophers who have tried to make clear or justify the traditional view that "necessary truths" are recognized as such "intuitively" have been able to elucidate it only in terms of the impos-

[1] E. DUPRÉEL: *De la Nécessité*. Archives de la Société de Philosophie Fascicule, 1., Bruxelles: Stevens. 1928. Pp. 40. 5 fr.

sibility, or inconceivability or absurdity of its contradictory. Confronted with the contradictory, we cannot see how to avoid affirming the "necessary" proposition, and "it is the idea that *this latitude is refused us* that the word necessity expresses." He next seems to take this as implying that "the *foundation* of all necessity is an act of intuition," and infers that if "an absolute value" is to be accorded to necessity, "it must be founded in an operation *sui generis*." The situation in which a necessary proposition is seen to be necessary (*viz.*, in which we see that "the latitude" of asserting and accepting the contradictory "is refused us") really involves a brief argument (one passing from the proposition in question to its denial) in which we experience the impossibility of admitting the denial. This "petit raisonnement," by application of the principle of contradiction, closes with an intuition of the absurdity of the contradictory. It cannot, however, justify the view that necessity is "absolute," for the argument, by invoking the principle of contradiction, is circular. The first part of the paper concludes that there is not, as supposed in the classical types of rationalism, any "fixed point of departure" from necessary truths. The very fact that "necessary truths" appear to us *as* necessary is, Professor Dupréel thinks, a sign that they express not our knowledge, but our ignorance —a sign that "we do not know of which judgments the necessary truth is a synthesis, and under what conditions it is true." The remainder of the article is devoted to indicating the changes the author supposes his conclusion requires in our conceptions of the nature of thought and mind. Here he appears to follow the lead of M. Goblot, maintaining that thought is essentially "construction": *raisonner, c'est construire*, though what "justification" of necessity, if any, is proposed in the end is not very clear.

In the second of these *Archives*,[1] MM. Barzin and Errera examine the recent attack of M. L. E. J. Brouwer, the Dutch mathematician, upon the validity of the principle of excluded middle. M. Brouwer regarding it uncertain, attempted to reconstruct the foundations of mathematics in such a way as to avoid assuming its validity. In this article the authors claim to have found "in the very foundations of his construction" a formal contradiction. Their argument, which contains replies to objectors, supporters of M. Brouwer, is too long and technical to reproduce here. It contains an interesting discussion of implication, and of the character of primary principles in formal logic.

Dr. Pierre Brunet's last book on the mathematician and physicist Maupertuis[2] deals with the same period, though not the same persons, as his former work, *The Dutch Physicists and the Experimental Method in France in the Eighteenth Century*, and that of his two forthcoming volumes, *The Introduction of Newton's Theories into France*. Of the present work, the second volume, dealing with Maupertuis's scientific work, is the more important, and the first half of it considerably more valuable than the second. It is surprising to find a whole "Deuxième Partie" devoted to "Maupertuis the Philosopher," and Dr. Brunet's three long chapters on his epistemology, his discussions about "matter and thought," and "natural theology and the moral problem," show that one's previous ignorance of Maupertuis's performances in these directions argues no grave defect in one. Dr. Brunet might well have compressed this material into a single chapter (were he, for completeness' sake,

[1] M. Barzin and A. Errera: *Sur le Principe du tiers exclu*. Archives de la Société Belge de Philosophie. Fascicule 2. Bruxelles: Stevens. 1929. Pp. 26. 3 fr.

[2] P. Brunet: *Maupertuis, Étude Biographique : Maupertuis, l'Œuvre et sa place dans la Pensée scientifique et philosophique du xviii^e siècle*. Paris: Blanchard. 1929. Vol. I, pp. 203; Vol. II, pp. 487. 75 fr. the two vols.

intent on dealing with it at all), for Maupertuis's philosophical ideas have little intrinsic merit, and seem to have exercised no influence, except possibly on the *philosophes du salon* of his own day. The six chapters in the first part on Maupertuis's contribution to pure mathematics, astronomy, and mechanics are, however, of a different order. They are most informative and clear and give the work its real value, which appears considerable.

II

Two-thirds of Professor BRÉHIER'S excellent *History of Philosophy* is now completed. This year the third fascicule ("The Middle Ages and Renaissance") of Volume I, covering from the fifth to the sixteenth century, and the first fascicule ("The Seventeenth Century") of Volume II, have appeared. These volumes promise and deserve to become the standard general history of philosophy in the French Universities. They tell their story simply and lucidly, guide the reader to essentials, and enter into enough detail to give a clear impression of the greater figures without losing the sense of continuity and development. There is appended at the end of every chapter a most full bibliography of the relevant *opera magna*, principal monographs, commentaries, and authoritative articles. The third fascicule,[1] beginning with an account of orthodoxy and heresies in the fourth and fifth centuries, contains a good discussion of the relation between Reason and Faith. The third chapter brings us into the *pensée ardente et variée, tumultueuse et confuse* of the twelfth century, in which the author distinguishes four movements which find expression through the theologians (who work towards the unification of the Christian tradition), the Platonist school of Chartres (the "Humanists"), the mystics, and the naturalist-pantheistic thinkers. The next chapter surveys Oriental philosophy (more particularly the Arabians, Avicenna and Averroës; and Maïmonides), and so prepares the way for the great thirteenth century (ch.v), in which the unification of the Christian tradition is now accomplished. It is, however, a unity that is "willed for social and political reasons, rather than intellectual ones." Dr. Bréhier's two score pages on St. Thomas is a most admirable résumé. The Angelic Doctor's "system" presupposes two great syntheses which he accepts "ready-made"—a theological synthesis of revealed truths (worked out by the theologians of the 'Sentences' in the twelfth century), on the one hand, and a synthesis of truths accessible to reason (Aristotelianism), on the other. There is no way of joining these two syntheses. Reason can be applied to *vérités de foi*—not, however, to demonstrate them, only to infer what consequences they imply when taken as premises. Next follows a clear account of Thomas's epistemology, his proofs of God's existence, and his Christianized Aristotelianism; then, after sections on the Averroïsm of Siger de Brabant, the Oxford school, Roger Bacon, and Lulle, we reach the fourteenth century (ch. vi), the epoch of Nominalism. Diverging elements in the thought of the Thomist period find expression in Duns Scotus, a thinker of real originality whose ideas cannot be fitted into the framework of scholastic doctrine so far developed. His main theses—the actual existence of matter, individuation by form, the priority of will—at once emphasize his departure from Thomism, define his position,and isolate him from the previous century. Thomistic Aristotelianism now loses in prestige, "philosophical speculàtion unfolds autonomously and freely." With the Renaissance (ch. vii)

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1 E. BRÉHIER: *Histoire de la Philosophie.* Tome Premier, Fascicule III: *Moyen Âge et Renaissance.* Pp. 523–791. 20 fr.

E. BRÉHIER: *Histoire de la Philosophie.* Tome Premier (first three fascicules): *L'Antiquité et le Moyen Âge.* Paris: Félix Alcan. 1930. Pp. 791. 55 fr.

four currents can again be discerned. First, theocentricism gives way to a vigorous but more or less vague "naturalism." Christian tradition, however, still dominates the efforts of the Platonic humanists, ever intent on finding in Platonism a philosophical synthesis that supports Christianity. Secondly, the Averroïsts of Padua, continuing the work of Siger de Brabant, find in Aristotle a naturalist who denies providence and the soul's immortality, and affirm a rigorous determinism. Thirdly, there are the strict "men of science," who take for their model neither Plato nor Aristotle, but Archimedes—"he who first had been able to connect mathematics with experience." "Archimedes, wholly ignored in the Middle Ages, reaches in a single stroke a state of science far more advanced than anything that the prevailing tradition could teach." Fourthly, there are the moralists who, like the scientists, trying to discover Nature independently of its origin or end, propose to elaborate a positive description of man's nature freed from reference to any supernatural destiny. So the seventh chapter, which illustrates these four tendencies in their concrete setting, brings us to the dawn of the seventeenth century, the inception and rise of Cartesianism and the mechanistic hypothesis in science.

Professor Bréhier's other fascicule[1] reads even more attractively. After a chapter on the conceptions of human nature and of external nature at the beginning of the century, and a further one devoted to Francis Bacon and his "experimental philosophy," we come to a remarkably succinct and ample résumé of Descartes's philosophy, an estimate of the Cartesian movement and outline sketches of the chief Cartesians. Malebranche is allotted a chapter apart, so too are Pascal and Hobbes. The longer chapters devoted to Spinoza and Leibniz, though they can hardly be said to present these difficult systems adequately, are probably as detailed as could be without losing trace of historical continuity. A chapter of twenty pages on Locke and a briefer one on Bayle and Fontenelle prepare the reader for the fifth fascicule on the Eighteenth Century, which the publishers now announce. Professor Bréhier's four fascicules are as entertaining as they are informative. Nothing breaks, the continuity of the account. Far from being a 'cram-book,' the work has the qualities of a scholarly, readable, and ample, though not-overburdened, history, without a trace of *parti pris*. And its accounts of lesser thinkers and 'tributary' movements is quite sufficient to help those who are not "specialists" in the history of philosophy to survey the whole story synoptically, fill in the gaps in their knowledge, and deepen their historical understanding of the whole.

Since the eighties, the standard treatise in France on the History of Philosophy has been the admirable volume of Paul Janet and Gabriel Séailles. This is not a "history" in the usual sense—in which Professor Bréhier's is—but a history of "Problems and Schools." Separate problems are taken up, and the differences in treatment and solution they have successively received is traced down from the "beginnings" to the first half of last century. These "single problems" (*e.g.*, "Sensation and External Perception," "Theories of Reason," "Universals," "Induction," "Matter and Mind," "The Problem of a Future Life"—in all twenty-six) are classified under the headings Psychology, Ethics, Logic, Metaphysics, and Theodicy, and form the first and major part (900 pages) of the work. The second part covers "historical philosophy," arranged in "schools." Evidently certain limitations and defects are inherent and insurmountable in such a treatment, but the "plain, historical method" also

[1] E. Bréhier: *Histoire de la Philosophie.* Tome II, *La Philosophie Moderne.* Fascicule I, *Le Dix-Septième Siècle.* Paris: Félix Alcan. 1929. Pp. 314. 20 fr.

has its own peculiar difficulties too. And each method of presentation has no less its own peculiar advantages, 'Janet and Séailles' and 'Bréhier,' in fact, usefully supplement each other.

Five Professors of Philosophy have now collaborated to bring 'Janet and Séailles' down to date, though still retaining its original *cadres*, by tracing the history of certain isolated problems. The difficulties of producing such a *Supplement*[1] that should be full enough to be comprehensible yet brief enough to remain an appendix, must have been formidable. In the main, however, the result is successful. Dr. DOROLLE manages to compress into two chapters ("Development of Deductive Logic" and "Induction") something of the results of Russell and Couturat, and of Lalande, Nicod and Keynes. The former chapter is a brief, clear statement of the origins of logistic, logical ideography, propositional functions and logical constants; while the second discusses important definitions of induction (Lachelier, Hamelin, Lalande), distinguishes logical from philosophical problems connected with it, and considers analyses of experimental procedure and the theory of inductive probability (Nicod, Keynes). These chapters occupy together only twenty-two pages! Professor REY, restricting himself to the Mind-Body problem, discusses mechanism and dynamism, and outlines certain large issues raised by Mach, Poincaré, the pragmatists, and, in particular, Bergson. Dr. TISSERAND, whose chapter on "Pluralism and Truth" precedes Professor Rey's, seems unduly absorbed in Pragmatism, and apart from this does not stir far beyond Renouvier and Cournot. There is no trace of a word of importance having been uttered on his subject by, say, anyone at Cambridge. Dr. PARODI, in his chapter on "The Moral Problem," seems unduly generous to minor men. Seven out of twenty-two pages seems an excessive allowance to Neitzsche. Dr. Dugas alone is able to bring to date *all* the problems treated in the corresponding division of the main work. His eleven chapters contain some excellent points about Gestalt psychology, Durkheim's theory that reason is a "social product," the views of James, Bergson, and Brunschvicg on both reason and memory, experimental work on the latter, and a section on what is of psychological interest in phonetics and semantics.—While the several divisions are unequal in merit, the whole "Supplement" is certainly a good and useful publication, a worthy continuation of a renowned treatise.

Four additions have recently been made to the series of "pocket" volumes —the *Collection Armand Colin*, two on Philosophy and two on Psychology. Dr. A. RIVAUD, late Professor at Poitiers, now of the Sorbonne, whose fine work on "The Problem of Becoming and the Notion of Matter in Greek Philosophy" raised him to the rank of an authority, has contributed a most readable outline of the "Main Currents in the Thought of Antiquity,"[2] perfectly suited for introducing the larger treatises. Dr. A. CRESSON, of the Lycée Condorcet, outlines in "The Philosophical Systems"[3] in plain, untechnical French the chief problems that have arisen, and the answers that have been returned to them, under the headings of "Dogmatisms," "Agnosticisms," and "Philosophies of Belief."

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[1] MM. PARODI, TISSERAND, DUGAS, DOROLLE, REY: *Histoire de la Philosophie: Les Problèmes et les Écoles. Supplement; Période Contemporaine.* Paris: Delagrave. Pp. 240. 15 fr.
JANET ET SÉAILLES: *Histoire de la Philosophie; Les Problèmes et les Écoles, avec Supplément.* 14th édn. Paris: Delagrave. 55 fr.

[2] A. RIVAUD: *Les grands courants de la Pensée Antique.* Paris: Colin. 1929. Pp. 220. Bound, 10 fr. 50; stitched, 9 fr.

[3] A. CRESSON: *Les Systèmes philosophiques.* Paris: Colin. 1929. Pp. 220. Bound, 10 fr. 50; stitched, 9 fr.

Professor C. BLONDEL,[1] of Strasbourg, returns again to his theme that collective psychology is logically prior to individual psychology, attempts to define the object of the former, and determine its position in the whole field of psychology and indicate its working hypotheses. Professor WALLON of the Institut de Psychologie, in his "Principles of Applied Psychology,"[2] gives as detailed an account of the psychology of work, aptitudes and the method of tests, professional selection and orientation, and the psychical motives and consequences of activity, as is often found in larger and expensive books.

Professor M. FOUCAULT has come to the aid of candidates for the *baccalauréat*, the entrance examination to the University in France, with a delightful little book of "First Lessons in Experimental Psychology."[3] Like all M. Foucault writes, these "Lessons" are of the utmost lucidity and directness. In seven chapters the ground of elementary psychology is resumed. Sensory experience, imagery and associations, mental work, intelligence testing, and voluntary movements are all subjects of simplified experiments, methods of measurement being introduced where possible. This splendid little work is equipped with its own "laboratory material" in the form of coloured leaves for experiments on vision, columns of words for those on imagery and association, and columns of numbers for those on the law of exercise and on mental fatigue. How could the candidate for the "*bachot*" be helped more?

Lastly, Dr. Henri PIÉRON, the distinguished Professor of the Collège de France, has had the happy thought of making his lectures on "Mental Development and Intelligence," delivered at the University of Barcelona, accessible to a wider circle of readers.[4] He begins by showing how mental development is dominated by biological and social conditions, and that the level of intellectual expression depends in great part on the intellectual material each civilization has furnished to the individual. He brings out clearly the confusion that has arisen in the use of intelligence tests between the determination of the levels of mental development successively attained with increasing age by every normal subject, and the measure of the intelligence proper to each individual. Were there an exact correspondence between them, the intellectual quotient would be invariable for each individual, but, in fact, it tends to vary through successive ages. The last lecture on problems of evaluation of intelligence, and the need of an analytical estimate, is most suggestive. We ought in the future to be able to define more exactly in what intelligence consists, to discover whether it consists of a group of entirely distinct aptitudes, or of some sort of central power which can be applied to special aptitudes. It would be an inestimable benefit for students of psychology to have these brilliant lectures translated into an English as clear-cut as Professor Piéron's French.

The following are the courses of public lectures in philosophy announced to be delivered in Paris at either the Collège de France or the Sorbonne: In PHILOSOPHY: Professor Lalande, *Nature and Method of the Moral Sciences*; Professor Brunschvicg, *Philosophy and Metaphysics*; Professor A. Rey, *Philosophical History of the Sciences at the Culmination of Hellenic Civilization*; Professor E. Gilson, *The Mysticism of St. Bernard de Clairvaux*; and *Researches into the Doctrines of the Early Middle Ages*; Professor Basch, *Æsthetic Sym-*

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[1] C. BLONDEL: *Introduction à la Psychologie collective.* Paris: Colin. 1928. Pp. 206. Bound, 10 fr. 50; stitched, 9 fr.

[2] H. WALLON: *Principles de Psychologie appliquée.* Paris: Colin. 1930. Pp. 224. Bound. 12 fr.; stitched, 10 fr. 50.

[3] M. FOUCAULT: *Premières Leçons de Psychologie expérimentale, à l'usage des candidats au Baccalauréat.* Paris: Delagrave. 1930. Pp. 94. 12 fr.

[4] H. PIÉRON: *Le Développement mental et l'Intelligence.* Paris: Alcan. 1929. Pp. xii + 96, 10 fr.

bolism and Sympathy, and *Classical Æsthetic in Germany from Herder to Kant*; Professor Fauconnet, *Sociological Problems*; Professor Robin, *Problems in the History of Ancient Philosophy*; Professor Masson-Oursel, *Explanation of the Yoga-Sútras*; Professor Rivaud, *Philosophy of Maine de Biran*; Professor Le Roy, *The Primitive Forms of Intelligence*, and *Disciplines and Criteria of Intuitive Thought*; Professor Bayet, *Moral Ideas in the Christian Churches during the First Centuries*.—In PSYCHOLOGY: Professor Delacroix, *Intelligence*; Dr. Wallon, *Origins of Character in the Child*, and *Development of the Feeling of Personality*; Professor Dumas, *Pathological Psychology*; Professor Piéron, *Auditive Perceptions and Theories of Hearing*.

S. V. KEELING.

PHILOSOPHY IN GERMANY

SUMMARY: *This survey deals with publications arranged under the heads of Neo-scholasticism, Phenomenology, and Scientific Philosophy, three of the main currents in contemporary German philosophy. Under the first head is* Philosophia Perennis, *an international collection of essays by sixty-eight Catholic philosophers. Under the second head are Edmund Husserl's* Formal and Transcendental Logic *and Roman Ingarden's essay* On the Place of Epistemology in Philosophy. *Under the third head is* Erkenntnis, *a new journal which expresses the views of such philosophers as Carnap, Dubislav, Reichenbach, Schlick, and Waismann.*

I. NEO-SCHOLASTICISM

It is a German custom to honour eminent philosophers before they are dead. The philosopher's sixtieth or seventieth birthday provides the occasion, and a collection of essays by those who share his outlook usually forms the honour. The two volumes of *Philosophia Perennis*[1] commemorate the sixtieth birthday of JOSEPH GEYSER, the distinguished Munich neo-scholastic; and the gift and the recipient are worthy of each other. Printed and bound in an exceptionally pleasing and praiseworthy manner, these stately volumes are also a credit to their publishers, one of whom has studied under Geyser. Nor do their contents belie their appearance. The book is composed of sixty-eight essays from Catholic philosophers in sixteen different countries, together with an introduction by the editor, FRITZ-JOACHIM VON RINTELEN, of Munich, and a full list of Geyser's published works. This survey will deal with some of the essays written in German. But the names of Gemelli, Gilson, Maréchal, and Sertillanges, to mention only a few, indicate how much valuable material there is in other languages as well. Only three of the essays are directly on Geyser. The others are on various aspects of *philosophia perennis*, which is taken to be either Aristotelian scholasticism or the elements common to different philosophical systems. The first volume contains essays on different philosophical periods from the Greek to our own, and many eminent authorities write on the patristic and scholastic periods. The second volume contains essays on different philosophical problems, classified according to the branch of philosophy to which they belong, and it is at the end of this volume that the three essays on Geyser occur. Max Ettlinger, formerly of Munich, writes on Geyser's psychology; Kurt Huber, of Munich, on his logic and epistemology;

[1] *Philosophia perennis: Aufsätze zu ihrer Vergangenheit und Gegenwart.* Two volumes. Regensburg: Josef Habbel. 1929. Pp. xviii + 1244. RM. 37.

and Ludwig Baur, of Breslau, on his metaphysics. All three accounts, though brief, are comprehensive and lucid.

It is not surprising that Geyser has become conspicuous in controversy, for the idealism and intuitionism which he has attacked have luxuriantly flourished around him. It is through controversy that he has reached his own position. He is an Aristotelian scholastic because he believes that Aristotelian scholasticism contains more truth than any other historical system. He thinks, however, that neo-scholasticism should aim not so much at interpreting as at developing the past. Huber points out that, as a realist, Geyser emphasizes, with Aristotle, the receptive character of cognition, though he believes that cognition is active as well. Cognitive activity, while not affecting that on which cognition is directed, does affect the content of cognitive acts. Truth, according to Geyser, consists in the correspondence between what is thought and objective facts. And logic must study objective facts, since laws of thought thus depend on laws of being. In opposition to Husserl, Geyser denies the reality of an independent world of ideal objects. In opposition to Bauch, he denies the reality of objective judgments. Anything that is must be a particular, and all essences and universals are in particulars. He emphatically asserts that the empirical self is a particular, and attacks all attempts to construct it out of a set of mental events. Geyser's disagreements with the idealists are legion—his repudiation of the transcendental self and his insistence on the contingency of every particular are further examples. But his position is not wholly dissimilar from Husserl's. Both philosophers are anxious to keep logic distinct from psychology, and to emphasize the importance of the intuition of essences (*Wesensschau*), though Geyser believes that intuition includes abstraction, while Husserl regards these two mental processes as fundamentally different. Nevertheless Geyser has vigorously supported proof in the great controversy about intuition and proof among German Catholic philosophers. He is opposed to all attempts, like that of Scheler, to base knowledge of the existence of God on intuition through feeling. In his view, the existence of God can be proved. God alone provides the ultimate explanatory principle of the world. God alone could have brought about the existing correspondence between our knowledge and objective facts.

Only four other essays, two in each volume, can be mentioned here. In the first volume the essay of Artur Schneider, of Cologne, on "The Logical Relativism of Hans Leisegang" deals with some of those attempts to divide philosophical systems into types which have recently been so popular in Germany. The first of these attempts was made by Trendelenberg, but that of his pupil, Dilthey, has attracted special attention. Dilthey, as the result of an empirical study, believes that there are three constantly recurring types of philosophy: Materialistic Positivism (*e.g.*, Epicurus, Hobbes, and Comte); Objective Idealism (*e.g.*, Spinoza and Hegel); and the Idealism of Freedom (*e.g.*, Plato and Kant). He also believes that the differences between types of philosophy are ultimately based on differences in temperament between philosophers. And since these temperamental differences will persist, variety in philosophy will persist. Karl Groos and Hans Leisegang have also contributed to 'typology'. The latter, in his *Denkformen*,[1] holds that different types of philosophy are due to different types of logical thought—to different logics. Like Dilthey, he ends with a relativist view, believing that every philosophical system must be judged solely by the laws of the particular logic to which it is related. Schneider is opposed to all such relativism. In

[1] Surveyed in this *Journal*, vol. v. pp. 108–9.

his view, the proper function of typology is to help us to discover the true philosophical system by clearly classifying our knowledge of past systems.

Franz Sawicki, of Poland, brings the historical essays to a close with a discussion of the philosophy of history as part of *philosophia perennis*. His aim is to state certain fundamental doctrines which are common to many different philosophies of history and extend far beyond Aristotelian scholasticism. He admits that they are not common to all philosophies of history, but he claims that they are common to all that give "a reasonable explanation of historical development." *Philosophia perennis* asserts, according to Sawicki, that the development of mankind exhibits a purpose analogous to that of the individual; that the end to be achieved by mankind is the realization of values, the highest of which are religion and morality; and that personal activity and divine reason have an important influence on the course of events. Opposed to *philosophia perennis* are: first, all theories which regard historical development as meaningless—which relegate the theory of purpose to "the museum of human errors"; secondly, all theories which admit merely some negative purpose, such as the removal of pain by the renunciation of the will to live; thirdly, all theories which regard individual activity as ineffective. In his brief discussion of the grounds on which *philosophia perennis* rests, Sawicki argues that only if God exists can historical development be purposive.

In the second volume Dietrich von Hildebrand, of Munich, writes on his conception of 'the objective good for the individual.' He distinguishes between three ethical concepts: what is good in itself, what is objectively good for the individual, and what satisfies the individual. A successful investment is merely satisfying. Moral improvement is objectively good for the improving person. It is also good in itself. These examples show, not only that the three ethical concepts are different, but also that they are not mutually exclusive. Moral improvement, we see, is both objectively good for the improving person and good in itself. Similarly, health is normally good for the healthy person as well as good in itself. And certain states of affairs—as in the case of travel, professional success, or friendship—may both satisfy and be objectively good for the person concerned. Nevertheless, the three ethical concepts are different, in spite of the fact that they sometimes coincide. Hildebrand specially emphasizes the distinction between what is objectively good for the individual and what satisfies him. The true 'interest' of the individual is not always that which satisfies him. Illness may be objectively good for a person, while revenge or cocaine may satisfy him. What is good for the individual must not be confused with what is good as a means. What is good as a means is good only in the sense that it leads to something which is good in itself. What is objectively good for the individual involves a new and independent ethical category. Hildebrand believes that the recognition of this category reveals many new ethical problems and throws fresh light on many old problems. His essay makes many suggestions, and applies his doctrine, in some detail, to the conflict between egoism and altruism. This conflict, he says, cannot present a problem for ethics, if we confine ourselves to the two categories of the merely satisfying and the intrinsically good. If the individual ought simply to produce something good in itself, it is ethically irrelevant whether the good produced is his or another's. Only when we admit that moral action must aim at producing, not merely what is intrinsically good, but also what is objectively good for the persons concerned—only then does the conflict between egoism and altruism become ethically important. Hildebrand pursues the question why there should be an ethical difference between producing something good for

oneself and producing something good for another person. Why, he quaintly asks, is it of no moral value to procure a tasty dish for oneself, meritorious to procure it for another, and still more meritorious to give away one's own share? He answers that in procuring what is good for another we are aiming at his well-being, whereas in procuring what is good for ourselves we are often aiming merely at satisfaction. But he admits that the ethical distinction between egoism and altruism is small in connection with goods whose power to satisfy is small.

A. Rohner, of Freiburg in Switzerland, condemns those modern philosophers who begin with problems of the self and end with some form of idealism. In his view, metaphysics arises from the question, What is reality? and its basic task is to discover the fundamental nature of reality. Problems connected with the human spirit or God should come at the end, not at the beginning. He thinks that Scheler's philosophical work is of special interest as an attempt to base a realistic metaphysic on an examination of the self. He briefly contrasts Scheler's position with that of Saint Thomas Aquinas. Saint Thomas Aquinas clearly realized that the basic metaphysical problem concerned the nature of reality, and he made the classic statement that everything that is consists of a whole composed of essence and existence, the nature of the whole determining their relative proportions. This view, according to Rohner, regulated all Saint Thomas Aquinas's further distinctions, as, for example, between infinite and finite reality and between substantial and accidental reality; and it led to his doctrine that in God alone are essence and existence identical. Thus Saint Thomas Aquinas's whole metaphysical structure is based on his solution of the problem of reality. Scheler, on the other hand, begins with the nature of spirit. In God, spirit is the perfection of knowledge and value, and, although itself devoid of force, is combined with 'urge,' which is conceived as blind energy. Scheler regards spirit and urge as respectively essence and existence. In God they are unified; in man they are distinct, and there is tension between them. The function of spirit is to sublimate urge, and spirit comes into existence only in opposition to the material world. Spiritual activity involves three kinds of awareness: awareness of the world, awareness of the self, and awareness of God. Awareness of God is fundamental, and, in conjunction with the other two kinds of awareness, gives rise to religion and metaphysics. Rohner disagrees with Scheler's attempt to base metaphysics on awareness of God, with his attribution of blind energy to God, with his treatment of the relation between essence and existence, and with his theory of sublimation.

II. Phenomenology

Edmund Husserl's *Formal and Transcendental Logic*[1] will be most appreciated by those who already know something about his philosophy. It assumes that its readers are familiar both with the special theories and with the special vocabulary which Husserl and his followers have developed. Nevertheless, even a novice, if he be prepared to read the book with patience and care, should not fail to grasp the fundamental points of phenomenology.

Husserl is dissatisfied with the present relations between science and logic. The sciences, according to him, regard themselves as independent of logic and uncritically employ methods whose sole justification is that they are useful in practice. They rise above the naivety of the plain man only to become engulfed in "a naivety of a higher order." A genuine science, on the

[1] *Formale und transzendentale Logik: Versuch einer Kritik der logischen Vernunft.* Halle Saale): Max Niemeyer. 1929. Pp. xi + 298. M. 14.

other hand, must be based on an *a priori* investigation both of the nature of possible knowledge and of the methods by which such knowledge may be acquired. And this investigation belongs to logic, whose function is to discover the essential nature of valid scientific inquiry and thus to provide a norm with which every actual science must comply. In this book, as elsewhere, Husserl emphasizes the importance of the *a priori*, and gives it a prominent place in phenomenology.

Husserl holds that the existence and nature of every object depend on conscious acts of the transcendental self. He does not hold that all objects are mental states; on the contrary, he explicitly rejects this view. But he does believe that all objects are constructed by consciousness. Consciousness is essentially intentional, and it constructs its objects in a series of cognitive acts. No object is constructed by a single conscious act. A physical object, for example, is constructed by a series of perceptual experiences. Indeed, it is the awareness of some objective constituent persisting unchanged through a series of mental states that justifies our distinguishing objects from experiences. The conscious acts which construct objects are acts of the transcendental self. The empirical self is as much an object as a toothbrush; and, like all other objects, it depends, for its existence and nature, on the conscious activity of the transcendental self. But, although all objects, including empirical selves, are mind-dependent, they are of two distinct kinds. There are existent objects and ideal objects. Any particular person or thing is an existent object. Propositions, essences, and all the objects dealt with by logic are ideal objects. Ideal objects are as real as existent objects, and we know them with as much certainty as we know existent objects. But the two kinds of objects are different, and, though the evidence for both is ultimately direct (the object is "itself given"), they are known in different ways. The conscious acts that construct and reveal ideal objects are different in nature from those that construct and reveal existent objects.

Formal logic, according to Husserl, must deal with logical objects (propositions, etc.), not with logical experiences. It is concerned with what is logically thought, not with how it is thought. Two things about formal logic are of great importance. (i) The objective elements in logic may be ordered on three different planes, corresponding to three different ways of judging. First, there is the theory of propositional forms—logical grammar—a system of propositional forms constructed without reference to their compatibility or truth. Secondly, there is the logic of compatibility, a system of propositions constructed by reference to their compatibility. Thirdly, there is the logic of truth, a system of propositions constructed by reference to their truth. These three systems constitute formal *Apophantik*. (ii) Formal *Apophantik* is related to formal ontology—the system which deductively connects the completely general concept of 'being' or 'something' (*Etwas überhaupt*) with its modifications, such as 'property,' 'relation,' and 'fact.' Formal *Apophantik* deals with what is thought to be, formal ontology with what is. The correlation between the two is complete, and together they make up formal logic.

Transcendental logic is not concerned with the objective elements in logic. It deals with the conscious acts by which these objects are constructed and known. Every investigation of objects, whether they be existent or ideal, must be based on an *a priori* investigation of the conscious acts which construct them. Hence transcendental logic is a necessary study of the conscious acts which construct logical objects. It is necessary because it alone makes possible a complete understanding of logical objects. And it guarantees the validity of the positive sciences as well as of formal logic. Its own validity is guaranteed by its forming part of transcendental phenomenology—that

investigation of the transcendental self's constructive acts which is its own guarantee.

Husserl's attitude to *Psychologismus* is thus made plain. Formal logic deals with logical objects and must exclude all psychological considerations. Transcendental logic deals with those conscious acts of the transcendental self which construct logical objects. *Psychologismus* is doubly wrong. Like "bad idealism," it identifies objects with mental states. And it imports into logic an empirical investigation of the empirical self, whereas what is required is an *a priori* investigation of the transcendental self.

The small book *On the Place of Epistemology in Philosophy*,[1] by ROMAN INGARDEN, of Lemberg in Poland, consists of one of three articles which set forth Ingarden's views on epistemology. He distinguishes between pure and applied epistemology. In true phenomenological manner he regards the former as an *a priori* science concerned with the essential nature of possible knowledge, whereas the latter is concerned with actual knowledge. Epistemology may seem perilously similar to psychology, on the one hand, and to the natural sciences, on the other; for, being concerned with knowledge, it must deal both with the subject and the object of knowledge. But, says Ingarden, it is concerned neither with actual subjects nor with actual objects. It considers subjects and objects only in so far as they are essential to knowledge. The psycho-physical subjects of psychology are not essential to knowledge, nor are the different existing objects with which the different natural sciences deal. Epistemology is really much more similar to phenomenology and the various ontologies. Phenomenology analyses the essential nature of conscious acts and epistemology the essential nature of cognitive acts. The ontologies inquire into the essential nature of different classes of objects, and epistemology into the conditions which valid knowledge of these objects must fulfil. Nevertheless, Ingarden stresses the point that, though related to phenomenology and the ontologies, epistemology is in no way logically subordinate to them. In his concluding section Ingarden urges that, while epistemology provides the sciences with tests of truth, it cannot provide them with data.

III. SCIENTIFIC PHILOSOPHY

Very different both from phenomenology and from neo-scholasticism is the scientific philosophy expounded in *Erkenntnis*,[2] a journal which continues the *Annalen der Philosophie*, and is edited by RUDOLF CARNAP, of Vienna, and HANS REICHENBACH, of Berlin. The outlook of this new journal is revealed by Reichenbach's statement, in his introduction to the first number, that philosophy must be based on empirical research in natural and mental science. And this outlook is made even more distinctive by most of the contributors to the first four numbers. Their articles present the view that philosophy has no special subject-matter; that it formulates no new propositions; that it analyses the propositions formulated by the special sciences; and that it is a method of clarification, not a science. According to the writers in *Erkenntnis*, philosophers who believe that philosophy does possess a special subject-matter are bound to ask nonsensical questions and to give nonsensical replies, because they talk about nothing. Scientific philo-

[1] *Über die Stellung der Erkenntnistheorie im System der Philosophie.* Halle (Saale): Max Niemeyer. 1926. Pp. 36. M. 1.50.

[2] *Erkenntnis*, vol. i, nos. 1–4, *zugleich Annalen der Philosophie*, vol. ix, nos. 1–4. Leipzig: Felix Meiner. Annual subscription, RM. 20. About six numbers are to be published, not necessarily separately, every year.

sophy is firmly established in both Vienna and Berlin. The Ernst Mach Association in Vienna and the Society for Empirical Research in Berlin are both devoted to its promotion, and *Erkenntnis* is their journal. In 1929 these two societies arranged a congress in Prague for the discussion of the epistemology of the exact sciences. The second, third, and fourth numbers of *Erkenntnis* contain a full report of this congress together with valuable lists of each speaker's published works. It is interesting to note that, while most German philosophers never refer to any of their English contemporaries, the scientific philosophers do refer, and with great respect, to Russell, Whitehead, and Ramsey. Their chief authority, of course, is Wittgenstein.

In the first number of *Erkenntnis*, MORITZ SCHLICK and RUDOLF CARNAP, the central figures of the Viennese group, set forth the distinctive view of philosophy outlined above. Schlick's article closely resembles the paper he read at the recent Oxford congress. He believes that philosophy has changed its direction, and that the sterile conflict of different philosophical systems is ended. The new view of philosophy as a clarifying process, not a science, will lead to the solution of all philosophical problems. This note of hopefulness is struck again and again by different contributors. The existing confusion in philosophy is due, they say, merely to the asking of nonsensical questions. We are now able to see what questions can be asked; and, if a question can be asked, it can be answered. Schlick thinks that, though not itself a science, philosophy should be honoured as the queen of sciences. It gives the ultimate explanation of scientific propositions, and is thus the alpha and omega of scientific knowledge. Carnap describes the new logic that must be applied to scientific propositions and concepts. He believes that it has entirely superseded the old logic, and points out that it is essentially symbolic, that it recognizes relational propositions (with important results especially for mathematics and physics), that its propositions are all equally ultimate, and that they are all tautologous. His contribution to the attack on past philosophies is based on the tautologous character of logical propositions and on the mere difference of verbal form between any deduced proposition and the propositions from which it is deduced. Philosophers mistakenly thought both that they could base existential propositions on logical propositions and that they could reach knowledge of objects not given in experience—as, for example, the Absolute—from knowledge of objects that *are* given in experience. At the end of his article Carnap outlines his view that all concepts, to whatever science they belong, are ultimately derived from immediate experience. We can construct a genealogical tree in which every concept has its place. Similarly, every scientific proposition is reducible to a proposition about the immediately given. Thus, ultimately, there are, not many sciences, but one.

Another contribution to the first number is REICHENBACH'S article on "The Philosophical Significance of Modern Physics." Modern physics has shown, he maintains, that the so-called *a priori*, physical categories apply only to objects of medium size—to objects in the world of everyday experience—not to exceptionally large or small objects, like the solar system or electrons. In the world of everyday experience space is at least approximately Euclidean, and events are ordered by laws that are almost strictly causal. But the space of the solar system is not Euclidean, and causal laws do not apply to electrons. This discovery that the old, fundamental concepts of natural science apply only to objects of medium size constitutes the Copernican revolution of our time. How, he asks, are we to reconcile the world of physics with the everyday world? The difference between the two worlds is enormous. The concrete things of the everyday world can be

grasped and seen, and they are regulated by simple, easily ascertainable laws. The world of physics is a world of moving atoms in which there is no light, no colour, no sound. But if we regard such a world as incomprehensible, it is simply because we are blinded by custom. We are so familiar with the categories of the everyday world that we treat them as universally necessary. Nevertheless it is possible to know the newly discovered categories by intuition. We can form an intuitive picture of concrete things in Riemannian space, ordered, not by causal laws, but merely by laws of probability. Moreover, the everyday world does, in certain important respects, resemble the world of physics, and an increasing recognition of these similarities is very desirable. Both worlds have the same ultimate criterion of knowledge—success in prediction. And the elimination of anthropomorphism which physics has achieved is gradually taking place in our ordinary life. Unwillingness to hold fast to beliefs merely because they are comforting is now a characteristic not only of science but also of our thinking in the everyday world.

The discussion of probability and causality occupied a prominent place at the congress at Prague. Considerable interest was aroused by the paper of Friedrich Waismann, of Vienna, on "The Logical Analysis of Probability." Waismann attacks the theory, popular among participants in the congress, that probability is analysable into relative frequency. On this theory, if I say that the probability of a dice's turning up 2 is one-sixth, I mean merely that, given a sufficient number of throws, 2 will occur, on the average, once in every six throws. Waismann states two objections to this analysis. First, it implies that relative frequency is ultimate—that there is no sense in asking why a certain relative frequency occurs. It does not, and cannot, attempt to explain the fact that, if the dice is 'correct,' the probability of throwing 2 is one-sixth, and if it is loaded, the probability changes. And this position is untenable. Secondly, whereas observation discloses only finite series, the statistical theory of probability must, in order to be useful to physics, treat its series as infinite, mathematical series. And this procedure is fallacious, because a mathematical series is essentially law-determined, while a purely statistical series is essentially lawless. Advocates of the statistical theory would answer, says Waismann, that the required infinite series are merely ideal limits like geometrical constructions, and that such idealisation is as legitimate in the theory of probability as in geometry. But this Waismann, founding himself on Wittgenstein, denies. Ideal limits are not reached by refinement of the actual; they are given in advance. Geometrical laws, for example, provide a syntax in which actual spatial situations may be described. Where—as in the statistical theory of probability—no system of presuppositions can be provided, there is no sense in speaking of idealization. Not being an ideal limit, a relative frequency cannot support the mathematical calculation which the statistical theory of probability seeks to base upon it.

Having made these objections, Waismann suggests another analysis of probability. This centres in the logical relation—the 'logical nearness'—of propositions. A proposition never refers to a single fact, but always to a region of facts. The smaller the region of facts referred to, the more precise and determinate is the proposition. One proposition follows from another if its region of facts contains that of the other. Two propositions contradict each other if their regions are wholly separate. Usually the different factual regions of different propositions overlap. The region of facts to which a proposition refers can be measured. If p and q are two propositions whose

regions of facts can be measured, the probability of q in relation to p is the ratio formed by dividing the region common to both propositions by the region of p. This conception of probability, Waismann believes, is not open to the charge of subjectivity, for it entirely depends on the logical relation of propositions.

HELEN KNIGHT.

NEW BOOKS

Process and Reality. By A. N. WHITEHEAD, Sc.D., LL.D., F.R.S., Fellow of Trinity College in the University of Cambridge and Professor of Philosophy in Harvard University (Gifford Lectures delivered in the University of Edinburgh during the Session 1927–28). (Cambridge, at the University Press. 1929. Pp. xxiii + 509. Price 18s.)

Though prophecy is always rash, it is tempting to prophesy that the publication of this book will mark one of the turning-points of the history of philosophy. It is not that it is free of faults. In places it is obscure with an obscurity the great Kant himself can hardly have exceeded. For this reason, if for no other, it will provide a fruitful soil for the cultivation of Ph.D. theses. The terminology used is more of a stumbling-block than an aid to understanding. After these strictures, and after adding that I am far from prophesying that Professor Whitehead's system is necessarily the philosophy of the future, let me attempt to justify the rash prophecy of the first sentence. I shall not do more than indicate certain main lines in his reasoning, as far as I understand it, and contrast it with traditional views. Let us begin with the traditional views.

Towards the end of the nineteenth century it appeared to the rash prophets of that generation that, broadly speaking, all the possible metaphysical systems had already been devised, and that the task for future thinkers was to develop special topics along the lines of one or other of the great systems, and with a very large measure of fundamental agreement. But during the present century there has been a great change. Philosophy, to adapt a well-known phrase, has struck her tents, and is once more upon the march.

What, for convenience, I shall call Seventeenth-Century Philosophy began with Descartes, and ended roughly with the end of the nineteenth century. On the purely philosophical side the work of Bergson marks the beginning of the end, as that of Planck and Einstein on the scientific. Descartes and the other pioneers, though they considered they were leading a revolt against the Schoolmen, carried with them only too faithfully one part of the scholastic philosophy, namely, the logic. It was assumed implicitly that there was something ultimate and elementary about the subject-predicate form of proposition. The universe therefore must be composed of substances and their attributes. This theory was never questioned by the founders of physics, Galileo, Descartes, and Newton, and was therefore worked into the "classical" treatment of Space, Time, Matter, and Motion. It is not until the present time that this fundamental framework of logic, ontology, and cosmology has been examined and criticized, although, as Professor Whitehead points out, there has been all along an undercurrent of ideas incompatible with it.

As has been said, Bergson delivered the first important attack on the philosophical side, but his work was purely negative, because he considered that the defects of seventeenth-century philosophy were inherent in the reasoning faculty of the human mind. On the scientific side criticism might have come from various sources long before it did, but for the tendency to let sleeping dogs lie. It is worth noticing that all the fundamental entities of classical physics were treated as substances, or as somehow based on

substance, with the exception of Entropy, which for this reason was looked on with suspicion, or surrounded with mystery. At any rate it is only during the last few years that the old physics of substance has clearly begun to disintegrate, and the new physics that is gradually appearing before our eyes, whatever final form it takes, will be a theory of events and not of substances.

Professor Alexander has been the first to frame a complete system of philosophy consonant with the new movements in scientific theory. Professor Whitehead's system involves a more radical and conspicuous departure from traditional ways of thought. To say that he has stepped farther is not to say that he has stepped the right distance or in the right direction, but the step once made cannot be ignored.

Professor Whitehead in his exposition refers to ideas he finds expressed by Descartes, Locke, and Hume which are in accord with his own views, though inconsistent with the general trend of thought of seventeenth-century philosophy. But one can make things clearer by going back farther still to the predecessors of Aristotle; not that we can burden these thinkers with the problems of our own time, but that their simple questions may stand symbolically for our more complex ones. Plato (or Socrates) was faced with the task of reconciling two trains of thought, both apparently inevitable and incompatible. The Eleatics pointed out that Being, that which *is*, must be one, immovable and changeless, otherwise it would partake of Becoming and Not-being. Heraclitus, on the other hand, pointed to the world we experience as a universal flux, where there is only becoming and perishing, and nothing stays or really is. The famous Platonic (or Socratic) theory of Forms was the first attempt at a solution. The theory assumed, however, that the flux of becoming was somehow less actual or real than the Forms which *are*. Thus Plato, and with him nearly all his successors, have come down heavily on the Eleatic side of the fence. In fact, the flux has not been considered quite respectable. The first and most essential fact about Professor Whitehead's philosophy is that for him the Forms are pure potentials, and it is the flux that is actual. Although all things are perpetually becoming and perishing, nevertheless in their transience they actually are, and nothing else that does not become and perish ever is.

Plato's main difficulty was to find any connection between the Forms and the flux they were supposed to define. The doctrine of substance and attribute appeared to get over the difficulty. The forms are attributes, and the substances to which they are attributed are something unchanging in the midst of change to which they can adhere. The doctrine of substance is by now deeply imbedded in thought and language, so that Professor Whitehead's attempt to expound a philosophy in which substance plays no part is inherently difficult.

Let us examine the significance of substance, starting from the consideration of any complete finite event—speaking a sentence, hearing a Symphony played, the whole life history of a man or a star. The term event is here used in the widest possible sense to include any process whatsoever, simple or complex. For simplicity let us take the shortest event. A sentence has a beginning and an end, and occupies a duration of time. Before it began, and as it began there were circumstances relevant to its genesis. It was perhaps the answer to a question. When it is finished it is (we hope) relevant to the genesis of other events; it is a causal factor. Thus if the questioner (Mr. Smith) asked the way to the Railway Station, and I told him correctly, what I said was a part cause of his getting there; though by the time he gets to the station, and indeed long before, my speech is no more, having

become "part and parcel of the dreadful past." But because I said "turn to the right," and not "turn to the left," the condition of the universe for ever after is slightly different; my speech has attained what Professor Whitehead calls "objective immortality." Now nobody calls a spoken sentence a substance, though it is a subject of attributes, and not itself an attribute, and is as we have seen a permanent causal factor. That is because of the prejudice against things that only last a short time. Mr. Smith and I are dignified with the name of substances because with luck we last for several years. When I say Mr. Smith is a substance, I am arguing from the fact that I have had certain experiences in which there was from time to time some sort of repetition of pattern which I recognized, and to the common features of the group I attach the name Smith. These common features, however, are all platonic forms or attributes, whereas I suppose that there is an individual and a substance, Smith, to which they are attributed. Though the substance is never seen without the attributes, in fact is only known by them, it is a sort of string on which they are strung like beads, and which holds them together. What we perceive of Smith is at any given moment a cross-section of the events that go to make him up. By comparing different cross-sections, we find not only a certain similarity, but a certain causal continuity. It is this that leads to the idea of a sort of string on which the cross-sections are threaded. But the cross-sections are not actually there as such; they are merely abstractions made from my particular point of view from the spatio-temporal volume of events that constitutes Mr. Smith's life, or the society of events, if you prefer the phrase. No string is needed. The apparent need for string is to hold together what has been arbitrarily pulled apart in my analysis of the situations as seen from my particular point of view. What is attractive about the string is that it is in some sense a non-temporal entity, and therefore appears to be a suitable substrate for the forms or attributes which are also non-temporal.

Elements of stability and order in the world are undoubtedly important, as witness the superior interest of matter compared with empty space. But this has led to a belief as persistent as it is groundless that mere perpetuity is important and valuable. The doctrine of substance has been a great support to this belief by providing something in the midst of the flux of events, which was at any rate potentially eternal, and yet not a mere Form. It was with reluctance that anything labelled a substance was allowed to be perishable. The mainstay of both Materialism and Idealism has been the notion that matter or mind respectively were eternal substances. A great part of the theory of physics has been directed towards finding entities guaranteed perpetual, and it is only lately the quest has been given up as hopeless.

What is novel about Professor Whitehead's philosophy is not his abandonment of substance for events, but his treatment of them. Large scale events according to him are systems of atomic events, and these, which are called "actual entities" or "actual occasions," along with their relations are the constituents of the universe; the actual constituents that is to say, for the Forms are only potentials. Every actual occasion is related to every other actual occasion in the universe, if only negatively by absence of relevence, and all relations are internal. Thus an actual occasion A is generated from its prehensions of occasions B, C, D, etc., where these prehensions are positive. Where the prehensions, as of R, S, T, are negative, that implies that R, S, and T are not relevant to the becoming of A. Apart from these prehensions A is nothing; that is, there is nothing there beforehand. However, A is not merely a passive recipient, for other actual occasions, its successors,

prehend it in turn, and are generated from their prehensions. The process of prehension is conceived as causal and as analogous to the experience of a conscious being. The actual occasions are monads, but are unlike the monads of Leibniz in that they are not substances, but events, and their relations are causal and constitutive. The universe considered as the sum of all actual occasions is therefore a unitary and compact system.

Each actual occasion grows out of its prehensions of its predecessors, and in its turn perishes in being prehended by its successors. The principle of creativity or novelty in the world arises from the fact that each occasion is a novel entity, and is able to hand on something new to its successors; something that is that was not present in the predecessors as such, but is the result of its unique existence. From this also follows the objective immortality of actual occasions which was mentioned above.

An intelligent and coherent conversation, in which each thing said follows naturally from the last utterance, and leads naturally to the next, seems the best illustration of a set of actual occasions and their relations. This would be a linear series only. Imagine a conversation in which all the speakers speak at once, and yet each listens to the others and answers what they say, and that would be a more complete illustration. For Professor Whitehead, as "both for Plato and Aristotle, the process of the actual world has been conceived as a real incoming of forms into real potentiality, issuing into that togetherness which is an actual thing. Also, for the *Timæus*, the creation of the world is the incoming of a type of order establishing a cosmic epoch. It is not the beginning of matter of fact, but the incoming of a certain type of social order." For him also God is the principle of determination which provides the ground why the "incoming forms" are these we find and not others. But God appears not only as the principle of determination, but also as an event; as the conductor of the orchestra as well as the score that is being played. The possibilities and difficulties in Professor Whitehead's theory of God cannot here be discussed further.

There are a number of other points that can only be mentioned. As there cannot be a duration less than the duration of one actual occasion, durations must be atomic. The Space-Time continuum therefore is in no sense primitively given, but is a construction from the relations of actual occasions. What is actual is atomic, continuity is potential. Part IV of the book is devoted to the development of the theory of the system of Space and Time required by physics. This is in part a re-statement of the theory of the author's *Principles of Natural Knowledge*. There is one important point to notice. In the course of the argument straight lines are defined without appealing to any process of measurement. If the result is correct, that is, if there are no illegitimate implicit assumptions, and if the entities defined have the properties required, it is one of great importance and interest. For a decision we must wait for the scrutiny of the experts.

The actual occasions are microscopic entities. The entities with which we are more familiar, electrons, atoms, stones, and men, are all societies of actual occasions of varying degrees of complexity and stability, and aiming at varying types of order. Professor Whitehead rejects the traditional body and mind dualism. The mind possesses no characters that are not to be found in embryonic form in the components of the body. What is peculiar about mind is the special organization of the society that is its body, and the high grade of activities that are thereby rendered possible. What is peculiar about the atoms of matter is the great stability of the society that constitutes them, but their stability is a reiterated pattern of becoming, not mere featureless being.

The theory of perception, which he has previously expounded to some extent in his book, *Symbolism*, is remarkably interesting. There are, he considers, two modes of perception, that of "presentational immediacy" which the philosophers have always discussed, and that of "causal efficacy" which they have either ignored or explained away. Memory is the most obvious example of perception in the mode of causal efficacy. This mode of perception as far as it can be described in a sentence is the effect of past events, particularly those of the percipient's own body, on his present mental processes. A plant grows when the sun shines on it, whereby we infer that it perceives the sun in the mode of causal efficacy. A man also sees, and what he sees symbolizes for him the causal factors in his environment where are the sun and the objects he sees, and in his body where are the organs by means of which he sees and feels and moves. The perceptions in the mode of causal efficacy are vague and uncontrollable; the others are controllable, capable of precision, and vivid, hence their importance as symbols for perception in the other mode.

I have dealt (inadequately and at excessive length) with certain aspects of Professor Whitehead's book which seem to me specially important, and that rather by way of exposition than criticism. Indeed, pertinent criticism of so far-reaching a speculative effort is no easy matter, and can only proceed from a thorough understanding, in the absence of which merely to point out verbal inconsistencies is futile. In any case verbal consistency is one of the lesser philosophical virtues.

In conclusion, I would make a comment of a personal nature. There is much in Professor Whitehead's philosophy that appeals strongly to a physiologist. It can hardly be doubted that at least a part cause of this has been his migration to Harvard at a critical period in his philosophical development, and his association there with Professor L. J. Henderson.

A. D. RITCHIE.

Essays on the Natural Origin of the Mind. By C. A. STRONG. (London: Macmillan & Co. 1930. Pp. vii+304. Price 12s.)

In these essays Mr. Strong develops the theory of cognition which (in a form he now regards as imperfect) was set forth in his earlier books, *The Origin of Consciousness* (1918) and *A Theory of Knowledge* (1923). He may also be said to attempt a vindication, with considerable alterations, of the substantial part of the thesis of his *Why the Mind has a Body* (1903). Such persistence concerning a single (although widely ramifying) problem is rare even among the more dogged sort of philosophers, and when it is conjoined, as in the present instance, with a very unusual range of exact knowledge in psychology, science, and metaphysics, as well as with outstanding acuteness, conspicuous ability, and an altogether admirable philosophical style, the result, almost certainly, is an event of genuine importance in the philosophical world. At any rate, it would be a very churlish person who would attempt to deny the signal merits of the present volume. While the title of the book suggests a collection of relatively disconnected essays, the substance of it gives the lie to the title. So far from being desultory, the argument is more closely knit than in most philosophical treatises, and is, in effect, an impressive, orderly, balanced, and thoroughly well-pondered attempt to present the salient features of an important metaphysic.

"The rock on which evolutionary psychology rests," we read on page 273, "is the fact that consciousness arises by natural processes, and that a world in

every sense dark, a purely material world, cannot naturally produce the light of consciousness." This statement, perhaps, serves as well as any other to indicate the general scope of the book. The story of mental evolution is not even begun. What is attempted is an analysis of the conditions under which such an evolution is *possible*. And what is maintained, speaking roughly, is to the following effect: Assuming, as we may assume, that the physical world is composed of "energy" instead of the old-fashioned "matter," there is no absurdity in the view that all energy may have an inner or sentient side, in short, that it may be soul-dust, and a "psychical flux," as well as a passage of physical events. This is not to say, however, that all energy is "conscious," for "consciousness" is a thoroughly ambiguous term connoting (and muddling) the *function* of "awareness" and the *condition* of sentience. Sentient soul-dust need not be aware of anything, not even of itself; but if, in certain instances, *e.g.*, when there is a developed nervous system, a certain concretion of soul-dust (Mr. Strong prefers to use C. S. Peirce's term "synechism") becomes capable of performing the function of awareness, the cognition arises naturally or non-miraculously. The question therefore is: How can the function of awareness be generated from sentient energy?

Awareness (including knowledge-about as well as knowledge by acquaintance) is capable of a very intricate development. On the principle, however, that if the pence are cared for, the pounds will look after themselves—a rather simple-minded principle, one must admit, even from the point of view of the Treasury—we may expect to reach the core of the question, Mr. Strong says, if we concentrate our attention upon the simpler forms of cognition viz., perception (as far as possible "pure" or un-apperceptive) and introspection.

Consider, then, perception. I take Mr. Strong to mean that perception is a "natural" process if (*a*) the soul is a part of nature which (*b*) is capable of exercising the function of awareness. On the first point (as I apprehend) his view is that physical nature is spatio-temporal and atomic. If the dust in the soul-dust, therefore, is spatio-temporal and atomic, the soul is a part of nature. And Mr. Strong holds that it is. His main problem, therefore, is the manner in which the function of awareness may be acquired by this synechism of spatio-temporal, but sentient, atoms.

Awareness, we are told, is a unitary act of a soul-pattern pluralistically constituted, but several moments in the unitary act can be distinguished by analysis. Indeed, there are three ingredients of perception (p. 92). viz., intuition, intent, and animal faith; and the act of perception is "self-transcendent, a passage not in space and time to the thing intended" (p. 243). "It is, to use a metaphor, a leap of the intellect, a self-transcending arrival at the object without passage through space or time" (p. 234).

How can this be? Mr. Strong's answer is that perception is a development from sentience by simplification and projection. A part of the soul is simplified into a sign (*cf.* the theory of Bradley's *Logic*, although Mr. Strong does not mention Bradley) or abbreviated into a phantasm. Such phantasmal signs (or sense-data) are said to "report" the characters of physical things in perception, but in themselves to be a modification of sentience, although quite distinct from unmodified, signless sentience. And this is the moment of "intuition" in perception. It is not, however, the moment of "intent" which (in correct perception) is the way in which we are "transported" to the object itself. And the factor which explains intent (as well as the singleness of the activity of awareness in any given operation) is action. We accommodate ourselves in a unitary way and direct our activities towards real things in real space (unless we misperceive them, and even then towards something real).

According to Mr. Strong, the prime error of most theories of perception is to suppose that the reference or intent of perception is towards these phantasms or sense-data. This error, he says, entails one or other of the two great historical fallacies in the philosophy of this subject, viz., phenomenalism (or the view that reality is made up of sensible appearances), and representationism (or the desperate expedient of attempting to give phenomena a transcendent reference contrary to their character and *ex hypothesi* entirely unverifiable). Both these errors must be fought. Phantasms are not what we know in perception, not what we intend in it, not what we apprehend in it. They are but parts of our sentience employed as signs; and the signs signify physical things (in the instance of perception) often truly, although sometimes falsely (and always in part falsely, since colour, *e.g.*, is phantasmal and never physical).

While Mr. Strong's statement of his theory is admirably clear, the theory itself is very complicated, and even if I have avoided gross error in this very sketchy account of the theory, it is likely that my omissions have robbed it of much that is necessary for its full intelligibility. Accepting this risk, however, I have to say that I find myself very perplexed. On page 32 it is stated that these phantasms or sense-data, "which really are in the self, cause something to appear outside the self," and on page 36 we are told that "when a portion of sentience, consisting of a multitude of fine parts, prompts to an act, it is simplified and projected, and gives rise to a sense-datum whose characters may coincide (but never do coincide more than partially) with those of the external thing. Such coincidence is possible because the sense-datum is a mere phantasm[!]. If and so far as there is coincidence, the external thing has become an object of awareness. The illusion which caused something sensible to appear as outside the body has brought to light a thing really existing there. An illumination from the body has fallen on this thing, showing it in some respects as it really is."

I find these statements very confusing. As Mr. Strong himself admits (in other places), they are decidedly metaphorical. For the place and space of these phantasms is either purely phantasmal and unreal, or else within the head (so far as I know Mr. Strong never distinguishes, as I submit he should distinguish, between the phantasmal and the real head). I confess, indeed, that this inveterate trick of the phantasms of appearing to be where they are not seems to me to be not at all "natural," and I shall return to what Mr. Strong has to say on the point. It further appears to me that his theory *is* a species of representationism. It is not indeed "representative perception of the usual sort" (*i.e.*, it is not the theory that we cannot directly apprehend anything except simulacra, and have somehow to guess or conjecture physical objects [by faith?] from them). But it does seem to be another species of representationism, for does it not assert that something in ourselves stands for and reports something not in ourselves? The "illumination from the body" never leaves the body. Its reports occur within the body. It cannot really "fall" on anything outside the body. What, then, can the phantasms do but represent? What is the use of the phantasms if they don't represent? Again, when Mr. Strong speaks of "coincidence," what he means is that the *characters* of the phantasms are the *characters* of the real thing. We correctly ascribe (in true perception) certain characters of our own sentience to outside things. Our own sentience, however, is existentially distinct from these outside things, because it and they are in different places. Therefore, at the best, there can only be *correspondence* of two *different* things of which (up to a point) the same universals hold. So far as I can see, Mr. Strong's theory requires him to say (and, I think, he does say) two things that to me seem clearly to be false, viz., that perception is a species of predication, and that phantasms are universals

(although they may be used to signify particulars). And why, O why, if Mr. Strong holds that we may *know* external things in perception, should he also hold that "animal faith" is one of the essential ingredients in perception? If there is sight, where is the need for faith?

But let me return to what I suggested was the unnatural trick of the phantasms in appearing where they are not. Mr. Strong says that the phantasms "which really are in the self cause something to appear outside the self because they move us to react as if there were something there" (p. 32 and *passim*). Why? If I move my head to look at an object in front of me, I never suppose that my head parts company from my body and wanders off as a sort of vanguard of action; I never suppose that any bit of my head does so; and I am subject to no illusions of this sort. Why, then, should a bit of my *sentience* (which is literally part of my brain) always appear to do this although it really doesn't? Mr. Strong's theory appears to be that my phantasmal head doesn't generate this illusion, but that my real head, or a bit of it, invariably does. I cannot see anything "natural," or even reasonable, in such a view. Again, the "action" in question (as is admitted) may be only the accommodating of one's eyes in vision. The "reports" in this case are given by kinæsthetic phantasms (which don't appear to be outside the body, although they are directed towards and in that sense "intend" what is outside the body). Therefore (1) phantasms needn't appear to be outside the body, and yet (2) might have all the unity of intent that appears to be required by "action."

I find that I have dwelt so long upon perception (although I have dealt only with a few aspects of Mr. Strong's theory of that subject) that I have no space for many other equally important parts of his theory, *e.g.*, his account of introspection (where introjection takes the place of projection, but where the "internal" sense is otherwise properly regarded as similar to the "external"), his fuller account of the soul and of the soul-body and mind-body relationships, or his illuminating account of his differences from, and his agreements with, William James, in his concluding chapter. Perhaps, however, I may be pardoned if I refer very briefly to some of the things he says about our knowledge of the past.

On page 209 Mr. Strong congratulates himself heartily upon having shown that "the absolute distinctness in nature of past, present, and future does not necessitate for their apprehension a similar distinctness of ultimate powers of the mind," and on page 215 he says that "the power of looking back is real, but it is not magical, since it depends on a present response called forth by present sensations."

So far as I know, nobody ever denied that, when we remember, we remember *now*, and if any philosophers ever held that, when we remember, we can *go* back to the past, and become our former selves, they were quite certainly wrong. What, then, is the "magic" that is complained of? On page 206 it appears to be "an ultimate power of the mind to view the past and the future." Therefore, I suppose, we have, according to Mr. Strong, either a power of "looking back" to the past without "viewing" it, or else a power of "looking back" *and* "viewing" it, which is nevertheless not "ultimate." The alternative is possibly interesting, but (I should say) quite certainly perplexing. When Mr. Strong, however, proceeds to argue (as I understand him to do) that there is no relevant difference between our expectation of the future and our memory of the past except the different adjustment of our bodies with respect to action, it appears to me that he is denying something very real indeed, and that his reference to action isn't nearly so satisfactory as he thinks it is. Let me mention one point only. From the standpoint of action the past is, so to say, *dismissed*, although it may teach us, we think, what to do if there are

signs of a recurrence of what formerly happened. Incidentally this implies that expectation itself depends principally, if not entirely, upon memory. But let us pass that particular point. Surely the past, to our knowledge, is a great deal more than something dismissed. There is an order in it, and a considerable power of discerning, without any special reference to future action, what was dismissed before something else was dismissed. The fact of being over and done with is nothing like the whole of what is implied in memory. From the standpoint of action the reverse seems the case. The man who had to defend himself for making a proposal of marriage within a week of his first wife's death stated, quite correctly, that she was as dead as she ever would be. This simple consideration, however, scarcely seems a sufficient account of what is at least the strong *prima facie* distinction between our acquaintance with the past and our mere conjectures concerning the future.

JOHN LAIRD.

A Modern Introduction to Logic. By L. SUSAN STEBBING, M.A., Reader in Philosophy in the University of London. (London: Methuen & Co., Ltd. 1930. Pp. xviii. + 505. Price 15s.)

The publication of Miss Stebbing's *Modern Introduction to Logic* is an important event. Here for the first time the general reader has an opportunity of studying recent developments of logical theory without being compelled to make his way through a mass of books and of articles scattered through the journals. These developments have been mainly due, in this country, to Mr. Russell, Professors Whitehead and Moore, Mr. Johnson and Dr. Broad, all associated with Cambridge; so that we can say that Miss Stebbing has done for Cambridge thought what Mr. Joseph's *Introduction to Logic* did for Oxford thought. And we may venture to hope that her book will have as wide a public as Mr. Joseph's has had and deservedly continues to have. A thorough understanding of these two volumes should form the indispensable discipline of thought for the student who desires to cope adequately with the developments of modern philosophy. For many years I have regarded Mr. Joseph's book not only as the best introduction to Logic, but as the best introduction to Philosophy, that existed in English, both for the serious general reader and for the University student; with the reservation that Mr. Joseph left unrepresented just that whole school of thought whose views Miss Stebbing expounds in this book. Whoever reads the two, will now have ample material for carrying on the debate with himself on fundamental problems which is the essential activity of philosophising.

The books falls into three parts. The first part deals with the analysis of propositions, and is concerned largely with the nature of symbols, and with the exploration of propositional forms and of their formal properties and interrelations. An account of the Aristotelian logic is here included. As Miss Stebbing says, "Some knowledge of Aristotle's logical doctrines ought to form part of the equipment of an educated man. These doctrines and the terminology in which they are expressed have entered so deeply into the structure of Western thought and language that an understanding of them is necessary for the proper appreciation of much great literature as well as of Western philosophy. Certainly the student who intends to read philosophy would be seriously hampered in his understanding of the great metaphysical systems were he completely ignorant of Aristotelian logic." The modern developments of logic are thus seen as a further and more adequate analysis of the problems dealt with in the Aristotelian logic. Miss Stebbing goes on: "It has not been my

intention to take the student very far into mathematical logic, but only to enable him to realize that the principles of symbolic logic are not peculiar to a special kind of study, but are principles exemplified in everyday reflective thinking no less than in mathematical deductions. I have not sought to write an *Introduction to symbolic logic*: my purpose has been to emphasize the connexion between Aristotelian logic and symbolic logic."

The second part deals with the problems traditionally grouped under the general head of induction, and connected with the nature and methods of scientific inquiry. What is meant by a "science," a "cause," a "hypothesis,' a "theory"; how causes are sought for in the experimental sciences; how far the historical sciences can discover causes; such are some of the major questions discussed, and on which Miss Stebbing has many wise things to say, expressed with a clarity and precision that continually compel admiration. The general reader is likely to turn to this part of the book first, and I am quite ready to encourage him to do so; the greater part of it can be understood without a study of Part I, although Part I will gradually familiarize him with considerations and distinctions which he will meet in Part II under more complicated conditions. In this part some account is given of the general nature of statistical investigation, and of the theory of probability.

Part III completes the study by a treatment of the theory of definition, of abstraction and generalization, and of the characteristics of logical thinking; with a final chapter devoted to a sketch of the historical development of logic.

The general usefulness of the book is increased by an admirable index, by a select bibliography of books and papers, and by a note indicating those portions of the book which are specially adapted for a first reading.

In a book which involves symbols, a few misprints are to be expected on a first reading, however carefully the proof correcting may have been done. But I have noticed only two (p. 134, l. 13, and p. 143, l. 14), which the reader will be able to correct for himself, and one, which I mention because it may cause some difficulty. This occurs on p. 185, where in the definition of the logical product of two classes the last phrase should read: "and including every class *included in* each," and in the definition of the logical sum of two classes the last phrase should read, "and included in every class *including* each."

The book as a whole is a wonderful achievement of clear thinking, wide scholarship, and adequate expression.

L. J. Russell.

Immanuel Kant's Critique of Pure Reason. Translated by Norman Kemp Smith, Professor of Logic and Metaphysics in the University of Edinburgh. (London: Macmillan & Co. 1929. Pp. xiii + 681. Price 25s. net.)

Kant's greatest work has certainly had to abide its time for an adequate version of it to appear in the English language. The *Kritik der reinen Vernunft* was first published in 1781. Within the course of twelve years or so its contents were being expounded in all the leading universities of Germany. Kiesewetter in Berlin, Born and Heydenreich in Leipzig, Jakob in Halle, Reinhold in Jena, Buhle in Göttingen, Tennemann in Marburg, and many others, were making it the basis of their philosophical teaching, while theologians such as Tieftrunk and Stäudlin were applying its principles to Christian doctrine and morality. In over three hundred publications its tenets had either been inculcated or criticized. Young men were flocking to Königsberg to sit at the feet of the renowned author. Yet at that time Paley's *Moral Philosophy*, Bentham's

Principles of Morals and Legislation, the Works of Thomas Reid, and Dugald Stewart's Lectures, furnished the philosophical nutriment of English students, and in our universities the Critical system was hardly so much as known by name. It is true that in 1795 an enthusiast, F. A. Nitzsch, made an effort to introduce the Kantian philosophy into England, and gave a course of lectures in London, but they seem to have occasioned more amusement than enlightenment. Then in 1798 Dr. A. F. M. Willich published two volumes of Kant's *Essays and Treatises*, containing very defective translations of the shorter writings and of the *Metaphysic of Morals*, and these again naturally failed to produce any impression. It was not until 1838, more than fifty years after its appearance, and thirty-four years after Kant's death, that a translation of the *Critique of Pure Reason* was published, when James Mill's *Analysis of the Phenomena of the Human Mind* was the latest novelty in the field of philosophy. The translation was that of J. Haywood. It was an unsatisfactory performance. Mr. Haywood's acquaintance with the German language was obviously far from extensive, and his philosophical equipment was quite unequal to the task he had undertaken. Seventeen years later, in 1855, there appeared the translation which has since been widely used of Professor J. M. D. Meiklejohn. It was a decided improvement upon Haywood's, and made by a man who had at least attempted to grasp the main principles of the Critical philosophy. But Meiklejohn was hampered by an insufficient knowledge of German idiom and of its use of adverbs and particles, and he repeatedly comes to grief in his effort to express the meaning of Kant's complicated sentences.

About the middle of the last century German speculation began to attract attention in this country. In 1865, the year in which J. S. Mill's *Examination of Hamilton's Philosophy* appeared, Hutchison Stirling's *Secret of Hegel* broke the ground. It was followed in 1874 by T. H. Green's massive *Introduction to Hume*, in 1877 by Edward Caird's stimulating *Critical Account of the Philosophy of Kant*, in 1879 by Robert Adamson's masterly little volume on Kant, and by numerous other works both of exposition and of criticism. So that by the time of the centenary in 1881 of the first publication of the *Critique* there were in England many earnest and strenuous students of the Kantian system. In that year Hutchison Stirling's *Textbook to Kant* and Max Müller's Translation of the *Critique* saw the light. The former contained a translation, based on the second edition of 1787, of the Introduction, the Æsthetic, and a large part of the Analytic. So far as it went, this translation, although somewhat free and unconventional, was admirable, the work of a scholar and thinker whose knowledge of German idiom was no less thorough than his insight into the subtleties of Kant's reflexion. Max Müller's Translation of the whole of the *Critique* was based unfortunately upon the first edition, although translations of the rewritten portions of the second edition were added in supplements. Max Müller had, of course, an intimate knowledge of the German language, and he was also an elegant writer of English. But despite his enthusiasm for Kant and the *Critique*, his grasp of the fundamental principles of the Kantian philosophy was in no sense profound, and he was far from being able to reproduce in his own thought the thoughts of his author. In consequence, his translation abounds with inaccuracies, and some of its paragraphs are simply unintelligible. It is true the appalling blunder of prefixing Noiré's sketch of all previous philosophy, which reads, as Adamson put it, like history in a fever, and produces an impression of whirling confusion, was remedied in the subsequent one-volume edition of 1897. Yet, even so, the work left much to be desired as the English version of a philosophical classic that more than any other has influenced the trend of modern culture.

Since the centenary wellnigh another half-century has gone by; and at length we are able to welcome the appearance of a really scholarly and effective translation of the great *Critique*. Professor Kemp Smith took up the task after having fully equipped himself for it. He had been engaged for years upon a minute and exhaustive study of the text of the *Critique*, and he had made himself familiar with the immense literature—expository, critical, and controversial—which has gathered round it. The first fruits of his labour were given to the world in the valuable *Commentary* published in 1918 (of which a second edition was issued in 1923), now an indispensable volume in the library of every student of the Critical philosophy. The present translation was, he tells us, begun in 1913, when he was completing the *Commentary*; but for several reasons had to be laid aside, and it was not until 1927 that he found leisure to revise what he had done and to continue it. Meanwhile, Raymund Schmidt's important revised text of the two editions of the *Kritik*, together with the *apparatus criticus* which he provided, had appeared in 1926, and thereby Professor Kemp Smith's labours were materially lightened. The translation follows the text of the second edition, the form in which Kant himself determined that his work should finally go down to posterity. Except in two cases, translations of the varying or omitted passages of the first edition are given at the foot of the pages. The exceptions are the two long sections which were completely recast in the second edition—those headed *The Transcendental Deduction of the Categories* and *The Paralogisms of Pure Reason*. The two versions are, in these cases, given in the main text, that of the second edition following immediately upon that of the first. This arrangement is clearly the best that could have been adopted. As is pointed out in the translator's Preface, the first edition versions are here requisite for an adequate understanding of those which were substituted for them, and it is now possible for the student conveniently to work at them in conjunction with one another. He will also find it extremely helpful to have throughout the original pagings of both the first and second editions given on the margins.

To have compared with the German text all the pages of Professor Kemp Smith's translation is more than I can, at present, claim to have done. But I have compared a good many of the specially crucial sections, and in every instance I have been impressed by the unerring penetration and dexterity which have guided the translator in turning Kant's sentences into clear and lucid English. Undoubtedly Kant's German makes difficult reading, although I incline to believe that the difficulty has not seldom been exaggerated. Leaving out of account the abstruseness of much of the subject-matter itself, so large an amount is frequently crowded into a single sentence, that not only has undue use to be made of parentheses, but particles, pronouns, and genders have to be dragged into requisition in order to mark the connexions between the parts of the sentence. A translator is bound to split up the more involved and complex sentences into simpler sentences; and Professor Kemp Smith has been singularly skilful in accomplishing this without doing violence to either the sequence of thought or the shades of meaning of the original. As an example, reference may be made to the long sentence occupying the last half of the page A 371, where, in discussing the fourth Paralogism, Kant contrasts empirical realism with what he calls transcendental realism. Max Müller, too, broke this sentence up into shorter ones, but in such a way that the trend of Kant's reasoning was entirely lost, whereas Professor Kemp Smith admirably contrives to preserve it.

"A good translator of Kant," Adamson once wrote, "must be at the same time a good interpreter of Kant." Professor Kemp Smith has amply estab-

lished his competence in the latter capacity. But Adamson went on to say that, while translation with intelligence is impossible unless the precise significance of each sentence, with its bearing on the whole of which it forms part, is clear to the mind of the translator, interpretation must never be allowed to take the place of translation. I have found no instance in which Professor Kemp Smith has infringed the rule thus laid down. In his *Commentary* he sometimes propounded views of Kant's actual doctrine from which other Kantian students would dissent. For example, I have elsewhere contended that in the more important passages in which the notion of 'transcendental object' is developed this notion is not identified, as Professor Kemp Smith took it to be, with the notion of 'thing in itself,' but is rather contrasted with it. Nevertheless, I have no objection whatsoever to raise to his translation of the relevant sections (A 104–110 and 250–251). It seems to me perfectly faithful and accurate, and not in the slightest degree twisted in favour of a particular interpretation.

In regard to the rendering of Kant's technical terms, Professor Kemp Smith will be prepared to find that opinions differ. Personally, I regret that he has adhered to the term 'representation' as the equivalent of the term *Vorstellung*. It is true that Kant himself equates *Vorstellung* with the Latin *repræsentatio*; but then the Latin term does not carry with it the implications of its English substitute. It is true, also, that there is in English the corresponding verb 'to represent' by which *vorstellen* can then be consistently translated; but the verb occurs comparatively seldom in the *Kritik*, and for it in any case a suitable rendering would have been forthcoming. On the other hand, the term *Vorstellung* signified for Kant almost exactly what the term 'idea' signified for Locke ("whatsoever is the object of the understanding when a man thinks"), and I cannot help feeling that this would have been the more appropriate word to use, in which case a capital letter would have been sufficient to differentiate the *Ideen* of the Dialectic (a device which Professor Kemp Smith himself adopted in the *Commentary*). Otherwise, the term 'presentation' would, it seems to me, have been preferable. Again, I do not like the phrase 'modes of knowledge' as the translation of the plural *Erkenntnisse*. How does a 'mode of knowledge,' *eine Erkenntnis* (A 19, B 33), differ from a 'kind of knowledge,' *Art von Erkenntnis* (B 21)? In some passages, doubtless, it does not differ (see, for instance, A 56, B 80), but in others it does; and, in either case, the word 'mode' appears to me apt to mislead. Often, I think, the plural, *Erkenntnisse*, may quite well be translated by 'knowledge,' in the singular (as, for instance, in B 109); and in more places than one Professor Kemp Smith does thus translate it (*e.g.* B 137). And where that is not possible, probably the least objectionable word to use would be 'cognitions.'

But upon points such as these there is not likely to be agreement. There will, however, be agreement in describing the translation as, on the whole, a striking and unqualified success. Our stubborn speech lends itself not readily to conveying the subtleties of philosophical thought, although, I believe, there are few, if any, shades of meaning it is incapable of expressing. Yet it has its own ways of expressing them, and its ways are not the ways of the German tongue. Professor Kemp Smith has recognized this, and has not attempted to render literally the innumerable particles which in the original serve a purpose no literal translation of them could serve. It is a great achievement to have given us an English version of the *Critique* which does not read like a translation. The translator has already contributed much to our philosophical literature, but no contribution could well be more acceptable than this conscientious and trustworthy presentation of Kant's classical work. He is to be

heartily congratulated on the completion of what must have been a laborious and delicate task, and he has earned the sincere gratitude of every English student of the Critical philosophy.

G. Dawes Hicks.

Coleridge as Philosopher. By John H. Muirhead, M.A., LL.D. (London: Allen & Unwin Ltd.; New York: The Macmillan Company. 1930. Pp. 287. Price 12s. 6d.)

This book, the latest addition to the Library of Philosophy, will be warmly welcomed alike by students of philosophy and lovers of Coleridge. The task which Professor Muirhead has undertaken is to show, first, that Coleridge as a philosopher has retained stronger claims to originality of thought than are generally conceded to him; and, secondly, that his actual written work comes much nearer, both in range and coherence, to a complete body of doctrine than is usually supposed. And that Professor Muirhead has in both instances sustained his contention no reader of this admirable exposition is likely to deny.

There are various reasons why for so long a period Coleridge's philosophy has lain under a cloud. To many who know him primarily as a poet he has seemed, at a crucial moment in his spiritual pilgrimage, to have taken the wrong turning; and those who have followed his further progress have been discouraged by many seeming aberrations, and by his failure to provide them with more than partial glimpses of the goal. Others, again, have judged his theories in the light of his actual conduct of life, and have either been repelled by the apparent discrepancies or have rejected his philosophy as a mere device for the comfort of his soul. Finally, the disclosures of Ferrier and others about the middle of last century as to the extent of his verbal borrowings from the German philosophers, especially from Schelling, have served more than any other cause to discredit him as a teacher whose work would repay study.

On all these counts, as Professor Muirhead shows, Coleridge has been superficially and therefore unjustly judged. That the philosopher in him stifled the poet is not for one moment borne out by the facts. Coleridge was from the first a philosopher, in the sense that he was an ardent and indefatigable seeker after ultimate truth; and it is questionable whether it was not natural to his genius to seek and present that truth directly rather than symbolically, by way of the speculative rather than the imaginative reason. His mind, as Wordsworth said of him even at Cambridge, was one "debarred from nature's living images" by its "self-created sustenance"; and the poems of his brief period of intense creative energy owe their greatness to other qualities than power of presenting the concrete world *sub specie æternitatis*. And if, as Professor Muirhead reminds us, it was the circumstances of his life and the tyranny of the "fatal drug" which, by robbing him of his inward joy, deadened his imaginative powers, it is doubtful whether those powers, even if they had been kept alive, would have served him as the instrument of the divine vision. It was in Wordsworth, after all, that Coleridge himself saw the true type of the philosophic poet.

With the charges of plagiarism, of lack of originality and of real speculative power, Professor Muirhead does not deal specifically in detail; but his whole book is a refutation of them. By a thorough and judicious study of all the unpublished material, including the numerous marginal notes, he has supplemented the knowledge gained from the published works and shown us that Coleridge's system, if lacking in finality and coherent exposition, had never-

theless been conceived as a whole and actually to a large extent worked out; and that, however much he may have been indebted to the German thinkers for stimulation and guidance, he challenged and discarded their ideas wherever they failed to satisfy his spiritual demands. The contention of Ferrier that "in every instance where we meet with remarks more than usually profound, bearing upon the higher metaphysics, it is Schelling and not Coleridge whom we are reading," is disproved time and again by the marginal comments on Schelling's writings. To say this is not, of course, to excuse Coleridge for his habit or method of verbatim borrowing.

Coleridge is further cleared in this book of the aspersion that his philosophy was designed merely to comfort his soul, or to square with the dogmas of orthodox Christianity. "Speculative truth," says Professor Muirhead, "was ever his absorbing interest"; and if his final views were coloured by his personal temperament and aspirations, and by the teaching of his experience, is not this largely true of every philosophical system since the world began? Nor is it very consistent in the same critics to accuse him of depending too much upon the thoughts of others, and of betraying too great a subjectivity in his outlook.

The chief value of Professor Muirhead's book, however, does not lie in the refutation of false or exaggerated charges (important as this is), but in his exposition and evaluation of Coleridge's philosophic doctrine. Tracing this with rare insight and sympathy through all departments of philosophic thought, he shows how in each of them Coleridge sought for a revelation of first principles, and found this revelation in the idea of an Absolute that is conceived as a Personal Will. This doctrine, as we should expect, finds its culminating expression in Coleridge's philosophy of religion, for as Coleridge himself puts it, in religion he saw "the flower and crowning blossom of the plant." Nothing is more interesting, and nothing perhaps more vital, in Coleridge's whole teaching than his development of the conception of personality as something which, so far from being dependent on barriers and limitations, is strengthened just in proportion as it breaks these down, and which therefore is not merely compatible with, but essential to the union of the finite and infinite. This idea underlies his explanation of religious, of moral, and of æsthetic experience. On the last-named subject Coleridge has been less explicit than on the former two, and the abrupt termination of the disquisition in the *Biographia Literaria* has been interpreted by his critics with varying degrees of sympathy. Whatever its cause may have been, no reader of Professor Muirhead's work will be inclined to accept an earlier critic's suggestion that "Coleridge had to stop because his original (in this case Schelling) did not help him out." If the argument was dropped, it was because Coleridge was at this time beginning to part company with Schelling, and to feel that he must work out his salvation alone; and because, as he himself stated later, "it contains the fragments of the truth, but is not fully thought out." Had he revised it later in the light of his fuller vision, he would no doubt have treated the imaginative activity as another manifestation of the finite personal will in its endeavour to transcend its limitations and realize its unity with the Infinite.

In his final chapter Professor Muirhead has given his considered estimate of the import of Coleridge's philosophic teaching. We are shown that Coleridge may in many ways be justly regarded as the interpreter of his age to itself; and that while his ideas were, for various reasons, looked on coldly by the succeeding generations of thinkers, they have in later times reasserted themselves, and are reproduced in much that is most characteristic of modern thought.

It would, however, be wholly wrong to regard Professor Muirhead's exposition as no more than an apologia. He shows himself as impartial in blame as in praise, and lays his finger with unerring insight upon the joints in Coleridge's philosophic armour. In the end, if this stimulative study leaves us with a heightened sense of regret that Coleridge did not do full justice to his wonderful intellectual gifts, we are compensated by a fuller realization of his power of self-conquest and of the high value of his actual achievement.

J. Shawcross.

Studies in Philosophy and Psychology. By G. F. Stout, M.A., LL.D., D.Litt. (London, Macmillan and Co. 1930. Pp. xiii + 408. Price, 15s.)

All admirers and friends of Professor Stout, which is as much as to say, all English-speaking people who care for good philosophy and good psychology, will be heartily glad to see these essays, most of which will have been already familiar to them, collected into a permanent volume. It would not be altogether proper in a personal friend and a very recent colleague of the distinguished author to attempt much criticism of the volume; still less to enter into controversy on the issues it raises. Even were it proper, I should not propose to do so, and this for several reasons. Professor Stout has a way of packing so much into an essay that it would be hard to discuss any of his problems as they ought to be discussed without writing a series of disquisitions of equal length with his own. Moreover, if I may say so without forgetting my own remarks before the ink is dry on them, his anxiety to reach finality in his views, and his consequent desire to incorporate in his own position all that is true in those of his antagonists do not make for ready and rapid comprehension. It would be hard to controvert any of the positions taken up in those of these essays which, in view of their date, may be presumed to be still maintained by the writer, without an uneasy feeling that the reply might be that one's objection had already been considered and its point, so far as it has one, already allowed for in the text itself. And finally, it is clear, I think, from the *Preface* that on what is, after all, the central topic of the most important essays, the nature of the external world and the relation of the knowing subject to it, Professor Stout's views are not yet fully disclosed, even in the latest written of these papers. The volume, read in the chronological order of its parts, reveals, as the Preface explains, a steady development from a generally Leibnizian philosophy to one of a different type. But it is hard to gather much more about the character of the newer doctrine than is told in the *Preface* itself, viz. that it has no place for a knowing subject which is not the *embodied* self, and that it insists that matter and mind are, though inseparable, "essentially and ultimately distinct." On the face of it, this looks like a change from Leibnizianism to something like Spinozism, but probably we must be content to wait a little longer for the appearance of Professor Stout's long-expected Gifford Lectures before it is safe to assume that one has really understood his final doctrine. In the *Preface* itself a tantalizing anticipation of the fuller disclosure is made when we are told that the "sensible appearance" of an external object is not, as Professor Stout used to maintain some while ago, mental; it is material, though not physical. No light is thrown in the context on the precise nature of the distinction here drawn between the material and the physical, and I do not think there is anything in any of the essays which explains the *dictum*. We must therefore continue to wait and hope. When the Giffords do appear, one may hope to have fuller light on the reasons which have led Professor Stout to dissatisfaction with the general

standpoint of Ward, which perhaps still appeals to others, as I confess it does to me. At present I do not feel able to follow except in the vaguest way the argument which is supposed to compel us to give up altogether "Ward's conception of a pure ego as a single principle." I try, indeed, to put together what is said in the essay on *Ward as a Psychologist* with the utterances of that on *Fundamental Points in Theory of Knowledge*, where I find that the "unity of the self" is apparently accounted for by the unity and identity of the (total) object it knows. But I do not feel my difficulties wholly removed. Thus I read that the self which asks a question and the self which answers it are identical "inasmuch as the question asked is identified with the question answered." I think to myself, probably foolishly enough, of the case where B furnishes the answer to a question propounded by A, and I am puzzled. I conceive I may be told that I must think of the *whole* question asked by A of his ultimate object (the Universe), and that this is no less than A's total attitude to life, which, no doubt, is never the same with B's. Once more, I do not see that the unity of A as a "continuant self" has been explained by bringing in the unity of the Universe. Of course, I admit that if there were not a universe which has a unity, we should all promptly go mad and lose our unity of selfhood. The unity of the subject and that of the object, as it seems to me, imply one another: they are, if you like to say so, two sides of the same great fact. But I still do not see how the one side can be derived from the other, and am driven to suspect that after all I have misunderstood Professor Stout's doctrine.

I find myself equally uncertain about the manful attempt made in the essay last named to deal with a problem which has always been very prominent in Professor Stout's writing, that of the perception of the external world. Professor Stout is there attempting to give a definite answer to the question whether or not his own view identifies "presentations," or *sensa*, with qualities of physical bodies. As it is put in the words of a correspondent, when one looks at a yellow inkstand, does one, according to Professor Stout, see the yellow which is a quality of the brass inkstand, or are there two yellows, one which is a permanent quality of the inkstand, and another which is a "momentary psychical fact"? It is made sufficiently clear that in intention Professor Stout means to repudiate any doctrine of "representative perception." He means to say that we actually see the yellow which is a quality of the inkstand. But it is equally clear that he means also to say that there *is* a "presentation-yellow" which is not identical with the "quality yellow," and apparently also that *this* yellow is seen. (He would not, I think, be content to say that, like the sensible species of Thomism, the presentation is something not itself seen, by the instrumentality of which the object-yellow is seen.) Now this position leads to what is stated as a dilemma. If the two yellows are quite distinct, we never see the yellow of the inkstand at all, and this statement is absurd. But if there is just one yellow, it is argued, we must say that, since the presentation-yellow differs with illumination, physical condition of the beholder, and so on, the inkstand has an indefinite multiplicity of shades of colour, and this is absurd too. Professor Stout then proceeds to give his own solution of the question, which is briefly that what any percipient sees at any moment is the "presentation-yellow," but the "presentation-yellow" *as conditioned*. The various "presentation-yellows" all seen *as conditioned* by all the different observers, or by the same observer under different conditions, somehow make up the quality-yellow of the inkstand.

I cannot help wondering whether the correspondent found the answer completely satisfactory. I have an uneasy feeling that it is an attempt to combine the advantages of a representative theory with the advantages of a

theory of direct non-representative perception in one statement, and that it is not wholly a success. If it really is absurd to say that the inkstand really has a whole series of shades of colours—and I am not sure that it is—is the absurdity removed when one says that "the single objective yellow *looks* different according to the varying circumstances under which it is perceived?" If one is determined to have a non-representative theory of perception, and I think the determination sound, may one not have to be ready to pay a higher price for it than Professor Stout apparently wishes to give?

A. E. Taylor.

The Philosophy of a Biologist. By Sir Leonard Hill, F.R.S. (London: Edward Arnold & Co. 1930. Pp. viii + 88. Price 3s. 6d. net.)

This little book is an expansion of Sir Leonard Hill's article in a recent number of the *Journal of Philosophical Studies*. It states a thesis and a summary of the relevant facts of physics and biology on which the thesis is based. These results are stated so clearly and simply that one does wish that the author would expand them into a large volume dealing with the recent advances of physiology. After all, it is the physiology of the medical schools that always has been, and is, at the growing point of biological investigation, and its results are far less familiar to the laymen than are those of physics. And, obviously, physiological results are just as essential as physical ones in any attempt to construct a natural-philosophy.

The thesis is stated in a few sentences. Science gives us the conception of an eternal, infinite, and unknowable power, and this conception is equivalent to our purest notions of God, that is, our notions when stripped of all superstition and dogma. The mystery of this conception of universal power is equally great whether we study it in stars and atoms, chemical reactions, or in the cerebral physiology of the higher animals. There is body and soul in the animal, but the soul, being sustained by the body, perishes when somatic death occurs. Yet the power behind body and soul is itself imperishable, though its manifestations are fugitive. There is immortality, which is impersonal; on the other hand, what we call consciousness, personality, character, and temperament, all end with bodily death. It may appear that something transcends the body and may be communicated to the offspring "by heredity," but this is only because the individual animal body has two components—a somatic and a germinal one. The offspring is, of course, simply the development of the germinal component. Such a notion of personal mortality is probably held by most biologists; it is very difficult to see what other interpretation can be given to physiological results. It does not, of course, preclude some notion of impersonal immortality. There is evolution on the inorganic side: evolution of matter, of stars, of chemical elements. There is organic evolution. Evolution, wherever it occurs, is a manifestation of the universal power.

It is only on the physical side that one ventures to criticize the philosophy. If the "power behind the sun" is God, and if it is that power, or energy, which we study as physicists, then there is a twilight of the Gods. If the power that sustains the universe is that energy that physicists study, then the universe is not self-sufficient. If there is physical or inorganic evolution, it differs in sign, or direction, from organic evolution.

It is only in the simplest physical-chemical systems that we can accurately study what we call power. In some complex of laboratory materials reactions proceed and come to an end. What we call "chemical affinity" only implies

the degradation of energy, and a chemical reaction goes on until the available energy represented by the reagents falls to its minimal value in the physical conditions. When the reaction has ceased, so much available energy has become degraded or dissipated: there has been made "an indelible imprint on the progress of events *somewhere or other* in the universe considered as a whole," for in the universe, as we know it, the degradation of available energy, which is the price that is paid for all physical happenings, cannot be undone. Power, then, which is available energy, we take it, is not eternal. The universe is not self-sufficient, and everything that happens in it inevitably robs it of power. It is true that energy is conserved, but only in its unavailable form as chaotic radiation of low frequency. The universe, as its available energy degrades, loses power and passes from its anterior cosmic state towards ultimate chaos. It should be noted that energy-changes can accurately be traced only in very simple systems; still, all that we know of stars, atoms, and living organisms is consistent with the belief that what happens there is essentially the same as happens in our simple, experimental systems.

There is inorganic evolution—in a way. Nebulæ evolve into stellar galaxies, stars evolve so that planetary systems originate, the lithosphere of our earth has evolved. But this result we can trace from such processes. The statistical probability of the parts of the inorganic evolving system increases, and the entropy, which is proportional to the logarithm of the probability, increases. This is not the case when an organic system of things evolves, for the statistical *improbability* of the arrangements and distributions of the things becomes greater in the course of the evolutionary process and entropy *locally* decreases. Therefore organic evolution displays a direction of processes that is the opposite of that of inorganic evolution.

We were often told, in the older books, that somewhere in the universe the second law of thermodynamics (the entropy-increase law) must be evaded, otherwise maximal entropy must have been already attained and universal happening must have ceased. Millikan and Lodge now suggest that somewhere in interstellar space scattered star radiation reconstitutes atoms by the action on it of very high-frequency radiation. This is as if the universe, in running down, also winds itself up, and doubtless there is inconsistency in the notions; there is really no support for them in the present confusion of cosmic physics.

Yet there is nothing inconceivable in a reversal of the entropy-law: Boltzmann actually suggested this in his conception of entropic and dysentropic phases in the universe, but was so repelled by the incredible statistical improbability of the reversal that he gave up the problem; all the same, the incredible improbability came from the extension of the gas-laws to the universe. But let us suppose that somehow or other the progress of things in the universe may reverse itself, then a run-down chaos may "reorganize" itself, with an unthinkably great blaze of power, as a new cosmos. What the "reversal" means we have, of course, no idea. It may be "the Finger of God stirring up the ether," or simply that reversal which Boltzmann found to be physically conceivable but only incredibly improbable.

JAS. JOHNSTONE.

A Pragmatist Theory of Truth and Reality. By SAMUEL S. S. BROWNE, B.Litt., (U.S.A.: Princeton University Press. 1930. Pp. 93. Price 9s.)

This Essay, which appears to have originated as a B.Litt. thesis in the University of Oxford, may be recommended as a sound and careful, if

somewhat elementary, study of the relation between the pragmatist conceptions of truth and reality. It is written in clear and lucid language, and endeavours conscientiously to state the current objections to Pragmatism as well as the case in favour of it. In the end Mr. Browne distinguishes between the pragmatist treatment of truth and of reality as follows (p. 93): "To be is to have been constructed epistemologically and thus made into an entity or substance. To be real is to be an entity of which the epistemological construction is of service in the satisfaction of a need or the solution of a problem." But I think he should have added that the "truth" and the "reality" so reached are in both cases only *claims* to truth and reality, and that the pragmatic verification of such claims is the unending concern of all the sciences. An earlier passage also, on p. 29, might be bettered. Mr. Browne declares, truly enough, that "truth and falsity are not qualities of verbal sentences or propositions"; but he goes on to say that "the only sort of entity which can properly be said to be true or false is an idea or conception." Now "idea" is a notoriously ambiguous word, and the psychology of "conception" is very disputable, and is not considered by him. So one does not know whether he means to *deny* the doctrine that truth and falsity are strictly qualities of *judgments* alone, and that their application to "conceptions" and "propositions" is a regrettable lapse into laxity, or whether he has merely overlooked the possibility of this interpretation. He can undoubtedly appeal to James in support of his terminology; but James was always willing to accept the language of his opponents and avowedly entertained too low an opinion of (intellectualist) "logic" to trouble to correct it.

F. C. S. SCHILLER.

Eidetic Imagery and Typological Methods of Investigation, By E. R. JAENSCH. Translated by Oscar Oeser, D.Phil. (London: Kegan Paul, Trench, Trübner & Co., Ltd. 1930. pp. 136. Price 7s. 6d. net.)

This volume is obviously a translation, and, both for that reason and because of a certain patchiness in the method of presentation of its material, is not altogether easy to read. The book consists of three parts, the third being an addition to the original Eidetik specially written by Professor Jaensch for the present English edition. This deals with recent developments of eidetic theory with reference to the general psychology of the senses and to 'typology,' or the grouping of individuals into more or less clearly defined types of personality. The second part is a four-page chapter in which the dual method of 'naturalism' and 'humanism' is defended as appropriate in psychological investigation. Experimental work is necessary, but treatment of the individual as a whole cannot be dispensed with. There is also a short appendix in which the development of perception and the bases of our conception of reality are discussed. Here also some of the arguments against attributing general importance to the eidetic theory are met. The most important part, however, is the first, in which the occurrence of eidetic imagery is discussed and far reaching consequences inferred from it. After describing the phenomena of eidetic or *quasi*-perceptual images, as experiences intermediate between actual sensations and memory images, Jaensch elaborates the methods by which these phenomena may be investigated and proceeds to distinguish types of persons according to characteristic differences in the eidetic images themselves. Thus, while some eidetic images approximate to after-sensations, others are more like memory images. Pure types, however, are rarely found,

most individuals exhibiting an 'amalgam' of the two. Jaensch claims that the phenomena are observable in most, if not indeed in all, children before puberty, and considers their occurrence to be an indication of a phase of development through which they normally pass. This phase can be helped or hindered by the kind of school teaching they get. The several types are further related to degrees of mental integration as well as to well-known clinical syndromes. Thus there is the 'T,' or tetanoid, type, and the 'B', or Basedowoid, type. The importance of this division into types lies, not so much in the mere distinction of the imagery, as in the relation of the different kinds of eidetic images to totally different types of mind and even of somatic characteristics. The B-type often indicates an artistic temperament, a slightly enlarged thyroid gland, an intense reaction to mental stimuli, particularly in the sympathetic nervous system; whereas the T-type is more reponsive to environmental stimuli than to inner ones. Though related to the syndromes of disease, however, the symptoms are held to be merely normal physiological characteristics of a certain stage of youthful development, in which integration is secured between the higher mental processes involved in perception and the sensations which are incorporated into percepts. In this view, instead of percepts being formed by the association of sensations, they are held to be originally very like memory-images; and the sensations themselves are regarded as being the ideal, though never attained, end-point of the cognitional process. The inference is to a strong nativistic element in perception; and, indeed, the claim is made that the doctrines of Kant in this respect "receive an empirical foundation through our researches." But the application of the extended eidetic theory is not only to philosophy, though we are taught that a man's philosophy also is determined by his type. It extends in a practical way to education and to medicine as well. Clearly, if integration between higher and lower mental processes is secured by the cultivation of eidetic processes, and if this can be helped or hindered by methods of teaching, that method should be adopted which best secures integration. In this connection Jaensch discusses the different kinds of education in Germany. "Pedagogical experiment leads us along the same lines; for it has been shown in exhaustive statistical surveys . . . that the eidetic phase and the whole mental structure accompanying it, in particular the perceptual structure peculiar to it, are preserved longer in children who are educated by methods adapted to the mentality of youth." The method indicated is that of the object lesson. Likewise, in pronounced cases of the T-type calcium treatment may be indicated. "The characteristics of this type of personality, including the eidetic phenomena peculiar to it, are susceptible to feeding with calcium . . .," by which their eidetic images may be diminished or extinguished. Jaensch stresses throughout the fact that, with the exception of over-emphasized cases, the T-type is a normal youthful type, the characteristics of which usually diminish later. But the possibility of altering types by drugs is interesting. Apart from the description of types, the methods by which eidetic images may be studied, and considerations of the import of the theory with respect to philosophical issues, the section is largely taken up with justification of the method of working from a few extreme examples to the normal population which lies between them and incorporates in a measure the features of both.

F. Aveling.

Opera hactenus inedita Rogeri Baconi. Fasc. X. Questiones Supra Libros Prima Philosophae Aristotelis (Metaphysica I, II, V–X). Nunc primum edidit Robert Steele, collaborante Ferdinand M. Delorme, O.F.M. (Oxford: Clarendon Press; London: Humphrey Milford. 1930. Pp. xxxii, 360. Price 28s. net.)

The devotion of Mr. Steele and his collaborator, Fr. Delorme, to Roger Bacon is altogether beyond praise. The sheer labour of wading through a minutely written, and very careless, MS. of these lengthy and far from exhilirating dialectical exercises on Aristotle's *Metaphysica* (itself not the most entrancing of works) and transcribing the whole for the press is a task as worthy of a Hercules as the cleaning of the Augean stables, and likely to be more thankless. I have myself read the whole of these pages slowly and attentively, but I do not feel I can conscientiously recommend anyone to follow the example unless he is much more deeply interested than I am myself in the minute matters of thirteenth-century logic. The Roger Bacon who appeals to the imagination as so picturesque a figure, both in his lights and in his shadows, is not to be found in these discourses, delivered as a youthful Master of Arts to students in the University of Paris. There is nothing here about *scientia experimentalis*, nothing about the primitive revelation of science to the patriarchs, nothing about the necessity to learn how to confound Antichrist by marvels which leave his own in the shade. Either Brother Roger in these early days had developed none of his most characteristic positions, or if he had, he felt that they must be be kept out of his course. So far as I can discover—but I am no expert in the subject—the philosophical standpoint of these lectures is just that common to most Augustinian exponents of Aristotle in the thirteenth century. (It is, of course, not Thomistic: the presence of "matter" in all created beings is insisted upon, and apparently also the plurality of substantial forms, if I apprehend the writer's drift in some places.) There is, of course, no connected argument. The lectures merely raise one dialectical point, suggested by the Aristotelian text, after another, discuss it *pro* and *contra*, and lay down a solution.

A word as to the printed text supplied by the editors. One would be very loath to utter any light disparagement of the devoted labour the text represents. And I am glad to see that they have appended to it a very long series of notes in which some of the worse errors of the very careless scribe are corrected. But it is unfortunate that a great many more are left, apparently because they have never been discovered. And I think it clear that the reason they have not been discovered is that the text has never been read through carefully by anyone sufficiently acquainted with the subject-matter. Hence much has gone unnoticed which either will not yield a sense at all, or yields a sense shown by the context to be impossible. The editors clearly have not regarded it as the whole of their business to print what a scribe set down, right or wrong, or they would not have made the scores of emendations they have very properly made. But they have not carried out the business of emendation in many places where it is absolutely necessary, and where the emendation to be introduced is rendered certain by the context. Since it is not likely that there will ever be another edition of Roger's *inedita*, it becomes necessary to warn a reader that he would be far from safe in relying on any passage as correctly representing Roger, merely because it stands in his work as published by the University of Oxford.

I ought, of course, to offer proof of this statement, and accordingly I append a very few examples out of many I have noted, taking them very much at random, and without any desire to judge the whole work by its weakest places.

P. 6, ll. 1–2. The printed text has here: movetur ad accipiendum melins pomum, tamen sine omni labore superius arguit, which is meaningless. In the appended note we are told to emend thus, movetur . . . pomum; tamen "sine omni labore" superius "arguit," which is not intelligible either. The real correction is, movetur ad accipiendum melins pomum, tamen sine omni labore ut superius argui*tur*. "The boy is impelled to take the better apple, but without any trouble, as is argued above."

P. 26, l. 20. Omne increatum est possibile, infinit*e* supponere. The notes merely remove the comma after possibile, still leaving the words without sense. Read, as the context requires, est possibile infinit*um* supponere. "Anything uncreated may be supposed to be infinite."

P. 50, ll. 5–6. Non autem a malo habet aliquam ordinationem, quia, primo, non ordinatur ad aliquid. This again is senseless, and the true reading is manifest, quia *privatio* non ordinatur ad aliquid. (And "evil," it is meant, is a privation.)

P. 61, ll. 33–34 (in a discussion of the question whether the ordered universe, was preceded by a "chaos"). Omnem privationem natus est habitus precedere, ergo cum res sunt separate, *multe* fuerunt. The reasoning shows that *multe* is a mere error for *miste*. (Separation is a privation of mixture, and therefore presupposes it. Ergo, since things are now separated, they were formerly mixed.)

P. 110, l. 27. Formas naturales, tam *artificiales* quam substantiales. How could there be an "artificial natural form"? Read, of course, *accidentales* "natural forms, both accidental and substantial."

P. 117, l. 2. Tamen secundum quod ens participant ibi unitas analogie. The *corrigenda* instruct us here to "correct" *unitas* to *unitatem*. But, in point of fact, the MS. is here perfectly correct, and the editors have misunderstood both the sense and the grammar, which is "in so far as they partake of being, there is a unity of analogy in that case (ibi)." Apparently the editors want to render "so far as they are being, they partake in that case of unity of analogy." This involves the very improper expression "to partake of unity of analogy," and would also require secundum quod *ens* to be changed to secundum quod *entia*.

P. 120, ll. 37–38. *Sciens* nichil preter substantiam et accidens et creatorem *est*. The actual quotation from the *de ortu scientiarum*, here alluded to, is given by the editors in their note. Yet they have not seen that Bacon is citing verbally, and that the nonsense which stands in their text must be corrected by writing, with the author cited, *scias* for *sciens*, and *esse* for *est*.

I have taken these examples of wrong editing just as they came to my hand in turning over the pages, without any attempt at selection. That there are many more, which I could have found quite as easily, surely justifies me in holding that, with all the industry that has been spent on deciphering the MS., the work of Roger Bacon has not been presented to readers in such a text as should be aimed at by the University of Oxford.

A. E. Taylor.

The Problem of God. By Edgar Sheffield Brightman. (New York: The Abingdon Press. 1930. Pp. 209. Price $2.)

This first volume under review recognizes that for the thought of to-day the doctrine of God is a problem. The volume consists of six lectures forming a continuous argument, and a single lecture which takes up a special problem of the relation of God and man. It is written popularly, but shows wide

knowledge, keen insight, and a fine spirit of tolerance. The first chapter describes the present situation of *Contemporary Doubt*, and offers proofs from many quarters of the rejection of the belief in God. The second then discusses the *Substitutes for God* which are being offered, and subjects them to a searching but always sympathetic criticism. The changes in the conception of God resulting from the intellectual development of our own time are presented in the two following chapters under two complementary aspects. There has been an enlargement of the conception, the writer describes it as *The Expansion of God* (Chapter III); there has been an elimination of certain ideas about God; he speaks of it as *The Contraction of God* (Chapter IV). The problem posed by the expansion is this: "Can the idea of God take up into itself all the new knowledge of science, the new insights of religion, and the new conceptions of philosophy without becoming so all-inclusive as to be meaningless?" (p. 85). This danger is averted by the argument of the next chapter on the Contraction. "A known God must be contracted within the limits of our reason" (p. 105). The author's own conception is offered in the fifth chapter on *The Resultant Idea of God*. He gives a longer and a shorter definition. The shorter runs: "God is a Person supremely conscious, supremely valuable, and supremely creative, yet limited both by the free choices of other persons, and by restrictions within His own nature" (p. 113).

Confining our attention to the question of the limitation of God, we may concede that God limited His freedom in creating free persons capable of opposing His will. "If we find God a problem," says the author, "it is not impossible that He also finds us a problem" (p. 125). Turning, however, to the world, we are confronted with the fact: "There is evidence of design in nature; there is also evidence of frustration of design and of delay in its achievement" (p. 126). Rejecting both the traditional solution of the problem and the dualistic, the author propounds his own solution: "It is due to factors within God Himself, which are eternal aspects of His nature, but not products of His will or choice" (p. 127). Evolution, he maintains, proves a finite God. Another evidence he finds in the nature of consciousness; but here he seems to assume too close a resemblance between human and divine personality. As our freedom is limited by past choices and present environment, as will depends for its range of choice on nature, as the active factors are balanced by passive, so it is with God. "God appears to be a spirit in difficulty" (p. 135). From Hegel a third evidence is sought, *i.e.*, that God's "goodness is not merely an abstract quality, but the constant victory of constant effort" (p. 136). Religious experience offers a fourth argument. God "is indeed love, but a suffering love that redeems through a Cross" (p. 137). The conclusion of the argument runs as follows: "The advance of modern thought has compelled us to modify our faith either in God's character or in His omnipotence. We believe that it is far more reasonable to deny the absolute omnipotence of the power manifesting itself in the world than to deny its goodness. On our view, God is perfect in will, but not in achievement; perfect in power to derive good from all situations, but not in power to determine in detail what these situations will be" (p. 137). Agreeing with the writer that man's freedom limits God's, that in making a world of a certain kind other possibilities were ruled out, that God has Himself a definite nature, which excludes the possibility of action contrary to it, I cannot accept the author's, to my mind, too facile solution of the problem, the gravity of which I fully realize. I cannot believe that in God's own nature there is the negation or the limitation of this perfection, that He would have created a world which He has not the resources to redeem,

that the way of sacrificial love is proof of weakness, or limitation of power. The religious consciousness seems to me to demand a God perfect in power as well as goodness. "Now we know in part, and see as in a mirror darkly"; and so we may acknowledge that the full solution lies beyond our present ken. Further, as God has not yet fulfilled His purpose, how can we solve in our interpretation a problem which has not yet been solved in reality? I would dissent from the writer's main thesis, while gladly acknowledging the ability and the reverence with which he has advanced it.

The sixth chapter seeks to prove "our right to assert the reality of a personal God" in a thoroughly up-to-date apologetics. The last chapter expands the theme of a suffering love of God, in the argument that God's share in human suffering does not degrade, but enhances the divine dignity. It is an interesting, well-arranged, well-argued, and well-expressed volume, and may he heartily commended as a candid and courageous, informed and intelligent endeavour to solve the greatest of all problems—the problem of God.

ALFRED E. GARVIE.

God in Christian Thought and Experience. By W. R. MATTHEWS, M.A., D.D. (Library of Constructive Theology.) (London: Nisbet & Co. 1930. Pp. xix + 283. Price 10s. 6d.)

Ritschl's statement that the field in which theology and philosophy meet is the doctrine of God is illustrated by the title of the volume to be here reviewed. The series to which the volume belongs, *The Library of Constructive Theology*, seeks "to lay stress upon the value and validity of religious experience"; but this is the only volume in the series the title of which makes reference to "religious thought" as well. It is impossible, as the author recognizes, to deal with the subject of God without this wider reference; and throughout the volume account is taken of the bearing of contemporary philosophy on the theological formulation of the religious belief in God. The starting-point, however, is religious experience, not exclusively Christian, as the first chapter deals with *Man's Experience of God* in religion generally, which is described as the recognition of and co-operation with "The Beyond that is akin," and is defended as "an anthropomorphic interpretation of reality." The second chapter, which deals with *The Development of the Conception of God*, shows that "anthropomorphism is the line of progress," until the development is consummated in God in Christ Jesus. The third and fourth chapters then discuss *The Christian Experience of God*. In these what may be described as a "liberal evangelical" theology is presented. The conclusion is reached that the New Testament does contain suggestions towards a doctrine of the Trinity. The fifth chapter, on *The Theological Conception of God*, offers a candid and effective criticism of the dogmatic development, and offers as a "reason for the partial failure of traditional theology, not a lack of intellectual power or religious experience on the part of the theologians, but rather the inadequacy of the intellectual tools which were available. Philosophy, as they were acquainted with it, was incapable of fulfilling the task which they imposed upon it" (p. 110).

In the remaining seven chapters the author seeks "to approach the eternal problem of God from the standpoint" of our own time, "in view of changed philosophical presuppositions and enlarged knowledge." In the sixth chapter, entitled *Transition*, "the present stage of intellectual development is surveyed," and "the converging tendencies of different schools of philosophy"

are interpreted as resulting in the displacement of static by dynamic categories, and as involving a challenge of theistic thought: "Is not the process (of the world) itself the sole reality?" (p. 131). This is the challenge the author seeks to meet. Chapter VII offers an argument for *Transcendence*. Assuming the evolution of the Universe from stage to stage, each transcending the one preceding, the consummation is found in God. "The ladder of being by which we ascend through the orders from matter to spirit leads, in the conviction of religion, to the supreme Being, who is the Transcendent One, beyond all orders of being, but at the same time the One, whose presence with every order and level gives them their existence and constitutes them into orders, and into an order." Here the author insists on the value of the doctrine of *Creation*. "The Creator transcends all creatures . . . as the active Will in which they take their origin" (p. 136). Chapter VIII then seeks to show that the Creator, so transcending, is *the living and personal God*. While it is admitted that not all religions unequivocally witness to the personality of God, yet "the Christian faith and the Christian experience are alike involved in the assertion that in the divine Life is the perfection of personality, so that it is manifested in the Incarnation through the life of a perfect human Person" (p. 163). The difficulties of this assertion are fully recognized. After a discussion on the nature of personality as active subject, not passive substance, reasons for and objections to "believing that God is personal" are dealt with. "Possibly the Godhead," the author says, "is best described as 'supra-personal,' but impersonal categories are not admissible." What is essential is "to justify and clarify the Christian experience of personal relationship with God" (p. 179). Chapter IX, on *The Holy Trinity*, shows how in that Christian experience this doctrine has its roots, and any influence from pagan religion is denied. The "economic" Trinity is rejected; a trinitarian constitution of human personality is expounded as an analogy of the divine Trinity; but another is found also in the conception of society as tending towards personal unity; and the author asserts his conviction that these analogies converge.

Having thus reached the Christian conception of God, the author in successive chapters discusses three problems. What is involved in Creation; how the evil in the world can be reconciled with the belief in God as love; and the way in which God, though eternal, is related to Time, so that it has a relative reality for Him, and He is carrying on the providential order of the World. I find myself in almost entire agreement with the theological and the philosophical conclusions of the whole volume. The treatment of all the varied topics is masterly; there is adequate knowledge and competent judgment. The claim of religions, specially Christian experience, to be fully taken into acount is maintained; and yet the need to justify that experience intellectually is recognized. The volume can be most cordially commended even to readers whose interest is dominantly philosophical, for not only does the author recognize the claim of philosophy to be heard on this subject, but may it not be urged that the Christian experience is a *datum* no philosophy can afford to ignore?

ALFRED E. GARVIE.

The Nature of Living Matter. By Professor L. HOGBEN. (London: Kegan Paul, Trench, Trübner & Co. 1930. Pp. ix + 316. Price 15s. net.)

Professor Hogben's book has a much wider scope than its title suggests. It contains a connected discussion of controverted biological questions: the

conceptions of vitalism and mechanism; the weight of teleology in biological speculation; the possibility of a completely objective study of animal behaviour; the possibility of neglecting consciousness in our descriptions of the *public* activities of even man himself; atomistic heredity and the application of experimental methods to the problems of eugenics; the biological conception of adaptation; the methodology of evolutionary hypotheses; and, most interesting of all, the author's own concepts of publicity and privacy in relation to investigation, to religion, education, humanism, reality, and the "holism" of General Smuts. The book begins by being polemical, but as it proceeds it becomes soundly critical and constructive. It has strong interest for all who are engaged in philosophical studies, and while it may repel some readers, it may not be neglected by them. Professor Hogben tells us that he did not intend to write such a book until he was sixty years of age. This would have been a great pity, for he is a young man who is already well known as a brilliant and successful investigator. Besides, he can always do it again.

There is reference, all through the book, to the controversy, mechanism *v.* vitalism, but it is not the cruder animism of the past, nor the equally crude materialism (though *that* was and is a potent conception in physiological discovery); it is not these views that Professor Hogben discusses. Of late years what used to be called "vitalism" has become "organicism," "holism," "organic purpose," and "emergence." Holism implies that there is something in the completeness of a physico-chemical system that was not in the parts of the system. Thus the kidneys, or heart of an animal may be excised from the body (which thereupon dies), and may be made, in suitable conditions, to continue to function. It is not, however, a viable system, capable of independent existence and reproduction, as is the body from whence it was taken. But the parts of the isolated organ (that is, its cells) can be made to remain viable, to continue to exist and reproduce in suitable artificial culture media. Emergence means that at new and raised, or more complex levels, properties appear in a physico-chemical system that were not in the parts of the system. But wherever such a complex system is sufficiently well known, we describe it by equations which do not contain any terms that were not in the equations that described the parts of the system. Thus the conceptions of holism and emergence do not appear to be clear ones. The notions of purpose and teleology, which are now so common in biological speculation, must also be rejected on grounds that we shall note presently. Mechanism and vitalism, like nominalism and realism, empiricism and transcendentalism, etc., represent what Professor Hogben regards as a fundamental incompatibility among thinkers. He does not discuss whether or not the antithesis is in "things themselves," in the cosmic and ethical process of Huxley, or in the entropic and dysentropic universal phases of Boltzmann. From his point of view the antithesis is between the conceptions of "publicity" and "privacy." It is in the treatment of these notions that the extraordinary interest of the book inheres.

Necessary to this treatment is that of animal behaviour, considered objectively. This is, of course, an old affair, but the work of Pavlof on "Conditioned Reflexes" has added enormously to the validity of the method. Pavlof's book is tiresome reading, and it appears that those who can expound it have much difficulty in showing exactly how it, in Professor Hogben's words, "mechanizes consciousness." But this is the essence of the work: if we bring food into proximity with the nose and eyes of a dog the animal salivates, and we call the reaction an unconditioned or absolute reflex, which is essential to the working of the dog-mechanism. If, just before, or simultaneously with the presentation of food, an organ-pipe is sounded, and if this is

done repeatedly, there is established a conditioned reflex, so that the dog will salivate even if food is not presented. The conditioned stimulus may be a note on the organ, a bell, a flash of light, a shape made out of cardboard, etc.—its physical nature does not matter. What matters is the time relation of indifferent and absolute stimuli. A neuro-muscular-glandular mechanism becomes set up—a rearrangement of elements in the activities of the dog. But obviously such a concatenation of elements may not occur, and we ask what is it that determines it? Plainly it is that *the efficiency of the dog-mechanism increases*, or there is organic tendency (not what is often called "purpose"). Again, the small boy on whom food was pressed protested that he was "fed-up," and that, though he could chew, he couldn't swallow. We replace that statement by this one: chewing is the stimulus for the swallowing movements of the œsophagus, as a rule, but when the stomach is full of food a further quantity would be detrimental. Therefore the chewing stimulus does not, in this case, lead to a swallowing-reflex because the efficiency of the boy-mechanism would be decreased. Again, we are forced back on the concept of organic tendency—the concatenation of reflexes does not occur.

Such descriptions of dog and boy activities are "pedantic," and are made with difficulty (and with a certain lack of humour). But they avoid all reference to "will," memory, voluntary activity, or introspection on the part of the investigator. It should be possible to extend the method of explanation to human behaviour, even to human social behaviour; but our author does not labour in that effort. It may be that experimental research will enable us to make the extension: Professor Hogben hopes so.

Why? Why is it desirable to "undermine consciousness" as an agent in human behaviour? Why is it desirable to make introspective psychology, memory, and voluntary bodily functioning unnecessary concepts for biological and sociological investigations? It is not that these are academic proclivities that have had certain implications in the past. It isn't that the author is necessarily prejudiced in favour of mechanistic hypothesis; he is by training and temperament very level and judicial. It is because in this way he leads up to his antithesis of publicity *v.* privacy.

There is a public (not an external) world and there are many private worlds. There is an "ethically neutral" world which is the same for all men and women. This scientific neutrality can be illustrated from successful physical results. When you and I observe an event, our time and space measurements are not quite the same. Then we apply the Lorenz-transformations, and I state my results in terms of yours, and *vice versa*. The relations between our two sets of data are then the same for both of us—*they are public data*. This publicity of statement with regard to biological and social descriptions, etc., is what we ought to try to obtain. There is, of course, a private world for each of us, and we mustn't try to make it a public affair. Myself, I'd seek to shatter the world and then remould it nearer to the heart's desire; but the records of history have too much of *that* in them. The Jerusalem that we would rebuild should be the city of all men. My private world has prejudices, obsessions, acquisitiveness, lust, etc.; so has yours, in a rather different way, and it is undesirable and ineffective to introduce these privacies into the public world of science or of human affairs. And by cultivation of the objective method of science we may avoid so spoiling things. (But not in this civilization, because of its momentum of individualism, Professor Hogben doubts.)

So the objective study of human behaviour along the lines suggested by Pavlof may enable us to dispense with the moral philosopher. Indeed, the author suggests, this has largely happened. Science has scored heavily in

giving us such things as aviation, broadcasting, and twilight sleep; moral philosophy offers us truth, beauty, and the good life. So far the gifts of science have been material ones, but need that restriction continue? That the study of behaviour, in its widest sense, may introduce ethical neutrality into politics, statesmanship, and govenment is an amazingly attractive proposition.

Still, of course, for every man and woman there is a private world, a *hortus inclusus*, in which there is enjoyment that is quite apart from ethical publicity. Certainly there is consciousness which private behaviour cannot undermine, and we believe, each of us, that there is voluntary activity. Surely, on reflection, Professor Hogben will agree that there is also a private physiology, and that introspection is a valid though private activity.

I only refer here to the author's penetrating criticisms of evolutionary hypotheses, of Darwinian selectionism, and his discussions of the biological conception of adaptation: these are matters for the zoologists rather than general readers. Nor do I more than note the very clear discussion of the results of the "Mendelian Renaissance," or of the genetical work of Thomas Hunt Morgan; it is to be hoped that Professor Hogben does not overrate the importance of all this for biological theory as well as for social reorganization. It is important to refer to his discussion of the basis of Eugenics—that basis must be vastly more experimental work than has yet been even contemplated. It was high time that someone pricked the body of Eugenism and (as Lord John Fisher said in another connection) let out the sawdust! Enough has been said to indicate the healthily provocative and comprehensive nature of the work. More than any book published for a very long time does it amplify the scope and interest of biology—both for biologists and non-biological readers. It is most clearly written, so that there is little doubt as to what the author means. It is written in the light of such a personal knowledge of biological researches and their results as to compel one to think again, and more closely, about those parts of the author's conclusions with which he is, at first, inclined to disagree.

JAS. JOHNSTONE.

The Mental Development of the Child. By Karl Bühler. (International Library of Psychology and Philosophy.) (Kegan Paul, Trench, Trübner & Co., Ltd. 1930. Pp. xi + 170. Price 8s. 6d.)

This is the translation of the author's *Abriss der geistigen Entwicklung des Kindes*, which appeared in 1919. It brings together a fair amount of material on the early development of the child, and it has separate chapters on the development of perception, memory, imagination, drawing, thinking, and social behaviour. The translation is poor, but it does not make reading a difficulty. It has references, mainly to German publications, at the end of each chapter.

Child psychology has suffered so much from the lack of even moderately adequate textbooks that the university and training college lecturer will probably give a fairly warm welcome to this translation for the sake of the beginning student. It is, however, a question whether the student will gain as much from the collection of facts as he will lose by the fallacious theories implied or put forward. Bühler takes the "stratification" view of mind and thinks of development as a series of stages. For instance, intellect, he holds, first manifested itself in his child between the tenth and twelfth month. His reason for choosing this age is that the child then first succeeded in some simple experiments, *e.g.*, pulling a biscuit towards it with a string. Bühler does not say why he considers that these actions involved intellect in a way that

no previous action of this child had. They obviously involved using something as a tool, but it is incredible that a normal child had shown no such tendency previously. In any case, however, it is not the particular age to which the crisis is assigned that is of importance, but the implication that such activities are due to a distinct mechanism which begins to function at a set date. Such a view goes counter to the whole trend of modern psychology and is in conflict with the facts established by careful study of children.

Koffka in his reference to Bühler's discussion of animal intelligence notes his tendency to revert to obsolete theories, even to theories that he himself has discarded.[1] The whole of this book on child psychology suggests new wine in old bottles. It is not a portrayal of development but a history of miraculous appearances.

V. HAZLITT.

Intellectual Growth in Young Children. By SUSAN ISAACS. (London: Routledge & Sons Ltd. 1930. Pp. xi + 370. Price 12s. 6d.)

This is the first volume of a series of three which is being written by the author on the subject of child psychology. The titles of the other two are *Social Development in the Child* and *Individual Histories*. The present volume is the most important contribution to the subject of children's thinking that has appeared. It has several related but quite distinct aspects:—

(1) An account of the educational experiment carried out at the Malting House School, with detailed records of the children's behaviour and conversations.
(2) A theoretical analysis of the factors determining children's intellectual development with evidence drawn from the records.
(3) A thesis by the author's husband on the subject of children's "why" questions.

It is difficult within the limits of a review to do justice to all these different aspects.

To educationists and to many of the general public the most challenging part of Mrs. Isaacs' book will be the account of the educational experiment. The aims as set out, "to stimulate active inquiry of the children themselves, rather than to teach them . . . and to bring within their immediate experience every range of fact to which their interest reaches out," would probably be acclaimed as *their* aims by the majority of present-day educators, but it is doubtful if many of them would recognize as essential to the fulfilment of these aims the degree of freedom, and the transcendence of prejudice and convention in the pursuit of knowledge described by Mrs. Isaacs. During the three years of the school's existence with which the book deals there were children from ten to twenty in number ranging in age from two years and seven months to ten years and five months. They were given an environment in which they could carry on most of the ordinary adult activities that interest children, and in which they were encouraged to solve for themselves the problems that arose. The work on their problems involved experimentation of the kind that would lay the foundations of work in physics, chemistry, botany, zoology, and physiology. The children's physiological interests were particularly marked, and in satisfying them dissections were carried out and anatomical diagrams and a human skeleton were used. There is no doubt that this will arouse a

[1] *Growth of Mind*, Koffka, p. 206.

great deal of criticism and antagonism amongst those who hear about it and who do not read the book. It is unlikely that any one who reads it, particularly pp. 160–170, with a mind open to conviction will remain hostile to the procedure even if he would be afraid to follow it in his own practice with children of three and four years.

The other outstanding feature of the school was the avoidance of the establishment in the children of verbal habits for which they had no background of experience or conviction. They were to learn by being and doing, rather than by talking, and they were to formulate from their own need to express facts and relations which they came to grasp, not as the result of hearing other people generalize. An example may be taken from the field of conduct. They were not told to be kind either to one another or to animals, but they were prevented if on any occasion they tried to hurt what could not protect itself. The staff relied upon their own treatment of the children as persons and the general atmosphere of comradeship to develop in the children through practice such habits of social conduct as are denoted by the word "kind."

Section III of the book, which deals with Discovery, Reasoning, and Thought, contains a discussion as to the nature of the child's intellectual development. In relation to this there is a criticism of Piaget's view that mental development can only take place *pari passu* with certain more or less clearly defined stages which he seems to regard as independent of experience and as depending in their turn on biological maturation. Mrs. Isaacs gives ample evidence from her records to show that, contrary to Piaget's assertions, children well under five years of age are interested in the relations between things in the physical world, and anxious to understand their connections. Piaget claims that the child is ego-centric and non-social to such a degree that his thinking can go on along pre-logical lines without his being forced to a consciousness of the contradictions that it involves. Mrs. Isaacs very cogently remarks that physical reality itself will force upon the child the consciousness of such contradictions, and still further she challenges, as at least exaggerated, Piaget's view of the non-sociality of young children. She very seldom found even her youngest pupils indulging in monologues directed to no one in particular when they were in the company of other children, but on the contrary she reports direct social talk with the very youngest. She says that she does not question the fact that very young children soliloquize aloud more than older children. "But since the same children at the same time showed also plenty of true social behaviour, in appropriate situations, it would seem to be a matter of a continuous process of socialization rather than one of hard and fast stages of development marked by crises of change."[1] Again she says: "It is not that one kind of structure gives place to another; it is rather that there is a progressive penetration of feeling and phantasy by experience, a progressive ordering by relational thought of the child's responses to the world. And this ordering begins at least within the first year of life and expresses itself clearly in non-ego centric thought by, say, the fourth or fifth years" . . . "the young child is no more a psychotic than he is a savage. At no point of his mental history is he either of these, any more than he is ever a worm or a fish in the womb."[2]

Contemporaneously with the appearance of Mrs. Isaacs' book an article by Huang appeared in the *Psychologische Forschung* on children's thinking. Using the clinical method, but choosing problems nearer to the child's interests than did Piaget, Huang collected data which led him to take exactly the same view of children's thinking and of the relation between adult and childish thinking as does Mrs. Isaacs. Thus he says that the children's physical concepts

[1] P. 88.

[2] Pp. 107–8.

were of a simple variety, "but not psychological, finalistic, magical, moral' animistic, artificialistic, or mystic."[1]

Just as Mrs. Isaacs emphasizes the continuity of mind in temporal development, so she emphasizes continuity in relation to its different forms of activity. She shows that in the play of the child phantasy, thought, and reasoning give place the one to the other and back again momentarily. Her records show that even a very young child indulging in phantasy has the double intent of an actor; he may show no confusion of his two worlds of phantasy and reality. Further, his phantasy may lead him to investigation of reality and to objectively determined thought with regard to it.

It seems strange that while Mrs. Isaacs emphasizes the disinterestedness of much of the child's search after knowledge, and attacks Piaget's view of the young child's ego-centricity, she seems to doubt the existence of such disinterestedness at the earliest stages. She says: "Much of the child's earliest interest in physical objects is certainly *derivative*, and draws its impetus from early infantile wishes and fears in relation to the parents. As I suggested in an earlier passage, the *first* value which the physical world has for the child is as a canvas upon which to project his personal wishes and anxieties, and his first form of interest in it is one of dramatic representation."[2] Observation of the young infant's laborious experimentation, which can easily be observed from the second month, and is probably present from birth, convinces the reviewer that, as Nathan Isaacs says, there is disinterested concern for knowledge from the beginning of the child's life.

Mr. Isaacs' thesis is an extremely interesting piece of work on the subject of "why" questions. He holds that a consideration of children's "why" questions affords evidence that the child is "actively interested in his knowledge as such and directly concerned with the question whether it is (*a*) correct, (*b*) sufficient, (*c*) clear and unambiguous." In support of this view he takes one group of "why" questions, viz. those arising out of a sudden clash between past experience and any present event. He says: ". . . the point about the type of experience to which I am referring is that it is not merely a stimulus or release; it presents a specific problem. It demands specific thought directed to the problem."[3] The young child's knowledge is unlikely to be sufficient to enable him to resolve the difficulty, but he soon finds that the word "why" addressed to an adult may serve as a key to undo the lock. The clash "stimulates the child to a genuine interest in the revision, extension, and reorganization of his knowledge."

By means of a large number of examples of children's "why" questions, Mr. Isaacs supports his thesis that the epistemic interest is genuinely present, and that within the realm of his own knowledge and experience the child can reason as well as the adult. He quotes several instances of the child's dissatisfaction with inadequate reasons and his persistence in trying to find a reason that will bring the given phenomenon into harmony with the rest of his knowledge or enable him to put his system of knowledge on a surer basis. In many of the illustrations the adult's ability to explain is sorely taxed by the child's ruthless logic.

The outstanding characteristics of this book as a whole are that:—

(*a*) The data upon which its arguments are based were collected from children thinking and acting spontaneously, not in response to questions set by adults.

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[1] *Psychologische Forschung*, Band 14, p. 177.
[2] P. 101. [3] P. 295.

(*b*) The incidents are given in the setting of the child's life.
(*c*) The writers, in presenting their material, are more concerned to show what children's thinking is really like than to compare it with adult thinking or to uphold by means of it any pre-conceived theory of mental development.

For all these reasons it will doubtless become one of the few classics in child psychology.

V. HAZLITT.

History of Japanese Religion, with Special Reference to the Social and Moral Life of the Nation. By MASAHARU ANESAKI, D.Litt., LL.D., Professor at Tokyo Imperial University. (London: Kegan Paul, Trench, Trübner & Co., Ltd. 1930. Pp. xxii + 423. Price 21s.

The eminent Professor of the Chair of the Science of Religion, known as teacher no less in the U.S.A. than in Japan, has here undertaken a formidable task, the achieving of which has been done under reverses and hindrances which would have paralysed the will in other men. Much of his MS. was destroyed in the great earthquake of 1923; the reconstructing of the destroyed University Library fell on his shoulders. But it was a wise American who wrote, "The one serious and formidable thing in nature is will"; and verily this man has borne him out. In a little over 400 pages, and with an excellent well-spaced type—here he has been luckier than some—he has given us a purview of religious Japan from a prehistoric limit to the present day.

I say religious Japan, rather than "of religion in Japan," for the "special reference" in his sub-title is not merely incidental. Almost the title might have been: The social and moral life of the Japanese, with special reference to their religions. It is this fullness of matter which packs the book from A to Z, makes it intensely interesting, makes it, in so far as the author's combination of piety and scholarly disinterestedness sees the true, of value to the student of history in any land, but makes it difficult to appraise in a brief review.

The English shows no trace of foreign pen-craft, the style is lucid and alive throughout, and if there is not an absence of the scholar's too frequent habit of writing a running supplementary treatise in footnotes, it is indulged in with refreshing reticence. The chief service rendered to the reader is the historical conspectus of epochs, of eminent names associated with each of them, and what they stood for, either as men or as women of either a New Word, or a renascent word in religious mandate, and further, the waxing or waning in those epochs of the great cults which have counted and still count in Japan: Shinto, Confucianism, Buddhism, Kirishitan (Christian), together with the way in which they have or, again, have not blended in such moral codes as Bushido, in Samurai ideals, in the systems we hear of called Zen (curious evolution from the old Indian Dhyana, or Musing), Tendai, Shinren, Nichiren, and others.

We are far in these pages from, say, the religious atmosphere of India. With very few exceptions we hear little about the Man: "the defective being yearning after perfection" (p. 399), and by that yearning becoming the More in his long Way towards the Most, who he in his nature potentially is. The being, the man, is of course here, but he is shown mightily concerned to bring his fellow-man along—a concern essential to his own permanent advance. And the part played herein by this and that woman helper, over-

looked till now even in Japan itself, will deeply interest women readers. Most significant, perhaps, in what we here read of this ever-strenuous people is the modern feeling-out after a New Word, a feeling we might expect with a plurality of great cults looming large. Syncretic New Words have come among them and have waned; not of such is the positive and abiding new mandate of That, Who, to adapt scripture, may in these latter days again speak unto us.

C. A. F. Rhys Davids.

Whewell's Philosophy of Induction. By Marion Rush Stoll. (Lancaster, Pa, Lancaster Press, Ic. 1929. Pp. iv + 125.)

A hundred years ago Herschel published his *Preliminary Discourse on the Study of Natural Philosophy*, and thereby stimulated considerable interest in the history, philosophy, and logic of science. In 1837 his friend Whewell published his *History of the Inductive Sciences*, which was followed, in 1840. by his *Philosophy of the Inductive Sciences*. In these volumes, and in others intimately connected with them, Whewell laid the foundations of important new departments of study, for which he has not received all the credit due to him. The history of science had to wait nearly a century before another Cambridge scientist (Dr. Dampier-Whetham) took up the torch to carry it a stage farther, and the study of that subject in British universities has barely made a beginning. Whewell was more successfuî in rousing an interest in the philosophy of science and in scientific method. But for Whewell and Herschel the *Logic* of John Stuart Mill (1849) would never have been written; and Mill's account of the logic of induction gave a great impetus to the study of methodology. Whewell's work in this field was almost entirely eclipsed by Mill's treatise. This was mainly due to the fact that Mill's empiricism harmonized better with the spirit of the nineteenth century than did the apriorism of Whewell. This is true of England, at all events. The same is true of the naturalism of Mill as compared with the supernaturalism of Whewell. Nevertheless there is much in Whewell's writings on the philosophy of science that deserves more attention than it is wont to receive. Miss Stoll's little book is a welcome contribution to this subject. It gives a concise and clear account of Whewell's position, its strength and its weaknesses, and it does not altogether ignore more recent contributions to the main problems. As the conflict between empiricism and apriorism, and between naturalism and super-naturalism, promises to become somewhat lively again, Miss Stoll's little book should make a special appeal to some readers.

A. Wolf.

The Psychology of Intelligence and Will. By H. G. Wyatt. (London: Kegan Paul, Trench, Trübner & Co., Ltd. 1930. Pp. vîii + 273. Price 12s. 6d. net.)

This addition to the International Library of Psychology, Philosophy, and Scientific Method deals with that important—some would say that most important—aspect of human nature which has so strangely been neglected by most contemporary psychologists, namely, the relation of Intelligence to will and the nature of the will itself. Reasons for this curious neglect are not

difficult to discover, though excuses for it carry little weight. It is not enough to claim that, as a natural science, psychology is concerned with laws and mechanisms, and therefore must eschew consideration of whatever seems to escape mechanical law, or explain it away as an illusion. Science is not prejudiced merely to discover laws; its aim is to discover truth in whatever form it may be found. Nor is it enough to plead that experimental psychology has become so departmentalized that psychologists have no time to give to deeper problems of their subject, or are so preoccupied with cognitive process that the investigation of will and conation is scamped. As a matter of fact, many psychologists have investigated orectic problems, and are still busy extending their researches. Nevertheless, as Mr. Wyatt says, professional psychology—the psychology of text-books and manuals—is singularly unhelpful in its treatment of the will and in relating will-process to intelligence. Viewing the matter from the standpoint of education, the author is interested not only in the imparting of information, but also in the training of intelligence, the regulation of passion, and the development and strengthening of the will. He complains that books on educational psychology have been of little service to him in providing a helpful theory of intelligence and volition, and adds with some justice that books on general psychology are in this respect no better. "There is much measuring of intelligence, but few attempts to fathom it, and will is apt to be disposed of by treating it as something else." The first part of Mr. Wyatt's book consists of a critical examination of five leading conceptions of intelligence, including those of the stimulus-response, the Gestalt and the Noegenetic schools. Rejecting the explanation of behaviour given by stimulus-response psychology as inadequate, and stressing the insufficiency of the Gestalt analysis, he develops his own view that intelligence is a psychological faculty which is characterized by the function of apprehending true or useful relations. It is innate, susceptible of individual differences, and, while manifesting itself at all levels of evolution, reaches its highest development in man. The conception of intelligence as the capacity of relational thinking leads Mr. Wyatt to examine Spearman's doctrine of general mental ability as exemplified in three different and irreducible processes in which all knowledge originates. These are (1) the apprehension of experience, (2) the discovery of relations between items of knowledge, and (3) the construction (eduction) of correlated items. Though his own view is closer to that of Spearman than to the others, the author believes that one principle only, and not three, is necessary to explain thought and behaviour. He reduces the first principle to the second by saying that "to cognize an experience is to relate it. Our very first act of knowing is contrast." Similarly, he reduces the third principle to the second by saying that in correlate eduction the relating capacity is the mental capacity involved; "the appearance of the correlative experience is its automatic outcome." The question at issue between Mr. Wyatt and Spearman is not a logical but a psychological one. A second point at issue is that of the relevance of the relation which is apprehended to some object or end intended by the person apprehending it. As stated, Spearman's second principle, to which the first and third are reduced by Mr. Wyatt, reads: "the mentally presenting of any two or more characters (simple or complex) tends to evoke immediately a knowing of—not "the", as quoted by Mr. Wyatt, but—relation between them. In Spearman's later volume, *The Abilities of Man*, the formula reads: "*any* relations that essentially hold between them." Mr. Wyatt believes, not that this constitutes intelligence, but that the power of apprehending *pertinent* relations does. But surely he is not quarrelling with Spearman here, except in so far as he has omitted to take

the quantitative principles into account. He writes: "for purpose of logical treatment Spearman has deliberately left the conative aspect as far as possible out." Undoubtedly, when stating a purely qualitative principle. But this principle must be taken together with the others, and in this connection more especially with that of conation. Two considerations are in place here. First, the pertinence of a relation to an end or goal is itself a relation; and to discover relations is a mark of intelligence. Secondly, though with characteristic caution Spearman states the law of conation with regard to intensity of cognition only, this obviously includes what is called change in direction as well as the enhancing of any character, or relation, required. If one relation is seen not to be 'pertinent' to an end, some other may be educed, or recalled, by the operation of the conative law. There would seem to be less disagreement between 'relational thinking' and 'noegenetic process' than appears on the surface.

The second part of Mr. Wyatt's volume contains two chapters on "Intelligence and Instinct" and "Intelligence the Master of Instinct." Here the two main points are argued that, while intelligence is "the servant and assistant of instinct, both in the preliminary stage where perception is incomplete, and in the intermediate stage of endeavour to satisfy the impulse," it is also the master of instinct in that it creates its own ideals, sets up its own authority, and bends instincts to its uses; because it can universalize the principles underlying conduct.

Part three deals specifically with the will as characterized by initiative and links it up with intelligence. The level of will depends upon the intelligence level. In general, the characteristic of living beings is the immanence of their activity; and this is manifested in the three stages of reflex action, instinctive or impulsive behaviour, and pure self-activity or true initiative, which is the highest form of volition. Truly volitional behaviour is thus action in accord with intelligence, and in so far free; and when this supreme form of initiative is in opposition to a lower form, the self may control or inhibit impulse, and act in accordance with reason. The will, accordingly, depends essentially upon intelligence. In its highest form it is impossible without cognitive originality. Intelligence, likewise, though creative, is impotent without volition; for it may present ideal principles of conduct, not imposed from without but strictly self-determined, and yet no conduct patterned upon them may ensue. Both intelligence and will, accordingly, are regarded as originative or initiative, the one of cognitive items, the other of actions. And both are forms of self-activity. Mr. Wyatt is contending for a view of human personality, or psychological personalism, which of recent years has been attracting many adherents. He relies, however, mainly upon the experiences of everyday life in support of his contentions, and criticizes much of the experimental work that has been carried out upon will-processes on the ground that life-situations are crucially different from laboratory-situations. There is no reason to criticize his criticisms, except to point out that controlled situations, which may be repeated again and again, allow us to reconstruct what actually *is* experienced when one resolves or wills, and to analyse with some degree of confidence the various elements which come together in a will-act. Is it not important, for instance, to obtain a valid distinction between volition and conation, or to show by instrumental controls as well as introspection that the feeling of effort is not essentially the same thing as the experience of willing? Is not the identification of willing with self-activity, as distinct from the feelings of bodily strains and muscular contractions, a gain, when it is made, not in the haphazard way of casual introspection, but with

all the precautions of experimental procedure? And, with regard to his criticisms that professional experimental psychologists have pet "isms" at stake, and that some of them "empower" abstractions, is this a failing peculiar to experimental psychologists? Mr. Wyatt's criterion that the final court of appeal in these matters is our own personal experience is none the less valid; and personal experience, both in the more exact experimental conditions and in casual introspections, as a matter of fact support his thesis. The author might, however, have made more of the available experimental results than he has done. He might have cited the works of Webb and Lankes as establishing a general will-factor, especially in support of his own conclusion that truly volitional behaviour is in accord with intelligence, and exhibits itself as consistency with or adherence to self-conceived and self-determined principle. For Webb has proved that will-qualities and profound intelligence correlate positively; and Lankes has shown that the self, in the case of persons accustomed to act on principle, can modify even its own physiological tendencies, such as that of perseveration or the opposite. *A fortiori* one might argue control of instinctive impulses.

The value of *The Psychology of Intelligence and Will* lies not merely in the analyses of volitional consciousness and the definite relation of will-process in its highest form of free initiative to the capacity of relational thinking in its most creative aspect, but in the reasoned challenge which it makes to all forms of mechanistic psychology. It is a pity that the volume should be disfigured by a number of misprints, some of a misleading character. "Monthly", for instance, appears twice within six lines for "Monograph"; and, still worse, "educative" does duty for "eductive."

F. Aveling.

The Social Contract of the Universe. By C. G. Stone, M.A. (London: Methuen & Co. Pp. vii+118. Price 6s. net.)

The idea that much of importance can be proved by pure metaphysics is not very general in these days. Fortunately, however, there are some who still uphold it impenitently, and are prepared to give an answer to what Mr. Stone takes to be *the* question of metaphysics, viz., "What must there be, or what cannot there be, if there is to be reality at all?" (p. 37). In short, Mr. Stone, at the lowest rating, deserves a medal for gallantry; and he is also to be commended in the highest terms for the austerity, simplicity, and conciseness of his style. It is sometimes complained of Cambridge philosophers to-day that they pursue simplicities so resolutely as to become wholly unintelligible; and therefore it is a pleasure to record that the same type of complaint may now be levelled against certain Oxonians.

It is, of course, a different question whether the attempt has succeeded. Personally, I am of opinion that it has not. The crucial introductory "proof" that "from the certainty that there is something" we can validly reach "action and infinity, each in a certain way" (p. 2), seems to me to fail because (*a*) it assumes "necessary production *a priori*" in a sense which Hume showed to be a *petitio* in his Treatise I, iii, Sect. 3, and (*b*) because it rests upon an imperfect logic. Mr. Stone appears to hold that nothing can be *just* what it is because, if it were, it would be disconnected with everything else; and I refuse to accept any logic which implies that because I am neither more nor less than "just" what I am, I am therefore bound to deny that I am my father's son. (Incidentally, if Mr. Stone's "proof" could be accepted, he would show,

not, as he thinks, that everything is definitely infinite, but that everything is indefinitely finite.)

If I am right in this criticism, I could not give the book a higher recommendation than the very important species of praise than is implied in Mr. Stone's pages 84 *sq.* But, of course, I may very well be wrong. And I hope that a great many readers, all indeed who enjoy a thoroughly abstract argument, will read Mr. Stone for themselves. Even if they do not agree with him, they will find a tonic quality in his pages; and his conclusion (very well indicated by his title) is even exciting.

I have to remark (1) that the concluding chapters are somewhat less austere than the earlier ones—this is as it should be—and (2) that, despite the general excellence of the style of the book, there appear to be lapses in this particular. I have read the following sentence on page 84 several times: "We can reason in metaphysics about value, because reality is made to be good, but not merely good, and there is what action as one must or cannot will as good", and I find the sentence atrocious. Its successor (which begins "And we can 'prove' what action as one agent must will as good") seems to me to be no better.

JOHN LAIRD.

Estatification. By His Honour Judge H. C. DOWDALL, K.C. (Oxford: Clarendon Press, Humphrey Milford. 1930. Pp. 40. Price 2s. 6d. net.)

This Presidential Address by Judge Dowdall to the Society of Public Teachers of Law in England and Wales is concerned with a psychological analysis of the "legal and political problem of corporate unity," and is based on what seems to the learned Judge to be two "self-evident" propositions:—

1. "The fundamental problem for a general theory of law is a problem of corporate life and action prior to that particular form of corporate life and action which imposes sanctions.

2. The general problem of corporate life and action is a problem of analytical psychology."

"Estatification" is a word evolved by the author from the following pedigree. "Status" he regards as a type of position, which a man may hold in the eye of the law. Anyone who has a "status" is technically called a "person," *e.g.* citizenship and citizen. An "estate" is a number of actual concrete interests taken as a whole, and there is no ordinary word, the author says, for a legally recognized type of interest. "Statification" he proposes as a term appropriate to describe any scheme whereby people and their interests are made into an articulate whole in terms of type as is done by law. What makes an "estate," that is to say its structure, is what the author says he means by an "estatification."

Taking what is known as a corporate body, its integration, the author contends, is not an incorporation of persons in the sense in which the word person is ordinarily used to signify a human being, but is an integration of interests, and, as he sees it, the points of social integration lie in the interests that bind men together in the various societies to which they belong. As a member of a society, a man's interest therein is all that is relevant, and anyone else may take his place provided he has the relevant interest and efficiency. In the case of a society, it is the articulation of interests which integrates men to the extent that they are integrated at all. This is the centre and pivot, he says, of the notion of "estatification" as contrasted with "incorporation." "Estatification" imposes a certain permanence in the articulated structure. It is with interests that articulate in accordance with a standing type, especially a legally recognized type that "estatification" is concerned.

The final conclusion to which the author at last leads his readers is that all corporate unity is derived, not from an incorporation of persons, but from an "estatifying" of their interests. If the proposition so expressed in this unfamiliar phraseology, and arrived at after a somewhat involved argument, means that it is generally some common interest which unites a body of persons together into a coherent group and evokes a unity of purpose and of action, there will not be much difference of opinion with the author of the Address.

L. L. M.

Received also:—

Fritz-Joachim von Rintelen. *Der Versuch einer Überwindung des Historismus bei Ernst Troeltsch.* Halle (Saale) Max Niemeyer. 1930. Pp.59.

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Joeph Ratner. *Spinoza on God.* New York: Henry Holt & Co. 1930. Pp. xiv +88. $1·50.

I. C. Isbyam. *Infinity and Ego.* London: C. W. Daniel & Co. Pp. 25. 1s.

The late J. M. E. McTaggart. *Some Dogmas of Religion.* (Introduction by C. D. Broad, Litt.D.) London: Edward Arnold & Co. 1930. Pp. lii + 299. 6s.

Tobias Dantzig, Ph.D. *Number: the Language of Science.* London: George Allen & Unwin Ltd. 1930. Pp. viii + 260. 10s.

W. Olaf Stapledon. *Last and First Men.* London: Methuen & Co. 1930. Pp. xi + 355. 7s. 6d.

Immanuel Kant. *Lectures on Ethics.* (Tr. Louis Infield, O.B.E., B.A.; Introduction by J. Macmurray, M.A.) London: Methuen & Co. 1930. Pp. xiii + 253. 10s. 6d.

C. Delisle Burns, M.A., D.Lit. *What to Read on Philosophy.* Leeds Public Libraries. 1930. Pp. 24. 3d.

James H. Tufts. *Recent Ethics in its Broader Relations.* Berkeley: University of California Press. 1930. Reprinted. University of California Publications in Philosophy. Vol. 12, No. 2. Pp. 20. 30 cents.

F. L. Cross, M.A., B.Sc., *Religion and the Reign of Science.* London: Longmans Green & Co. 1930. Pp. ix + 110. 4s.

A. C. Underwood, M.A., D.D. *Contemporary Thought of India.* London: Williams & Norgate, Ltd. 1930. Pp. 235. 5s.

W. Tudor Jones, M.A., D.Phil. *Contemporary Thought of Germany.* (Vol. I.) London: Williams & Norgate. 1930. Pp. viii + 278. 5s.

J. E. Nicole, M.R.C.P. & S. (Foreword by W. H. B. Stoddart, M.A., B.S., F.R.C.P.) *Psychopathology.* London: Baillière, Tindall & Cox. 1930. Pp. vii + 203. 10s. 6d.

W. C. D. Dampier-Whetham, M.A., F.R.S., *A History of Science and its Relations with Philosophy and Religion.* (Second edition.) London: Cambridge University Press. 1930. Pp. xxi + 514. 18s.

Sir James Jeans. *The Mysterious Universe.* London: Cambridge University Press. 1930. Pp. viii + 154. 3s. 6d.

Maurice Hutton. *The Sisters Jest and Earnest.* London: Hodder & Stoughton. 1930. Pp. 287. 12s. 6d.

A. E. Taylor. *The Faith of a Moralist.* (Gifford Lectures delivered in the University of St. Andrews, 1926–1928.) London: Macmillan & Co. 1930. Vol. I: *The Theological Implications of Morality.* Pp. xx + 437. 15s. Vol. II: *Natural Theology and the Positive Religions.* Pp. xx + 437. 15s.

C. Lloyd Morgan, D.Sc., F.R.S., *The Animal Mind*. London: Edward Arnold & Co. 1930. Pp. ix + 275. 12s. 6d.

C. Spearman, Ph.D., Hon. LL.D., F.R.S. *Creative Mind*. (Contemporary Library of Psychology.) London: Nisbet & Co.; Cambridge at the University Press. 1930. Pp. xii + 153. 5s.

W. D. Ross, M.A., LL.D. *The Right and the Good*. Oxford at the Clarendon Press. 1930. Pp. vi + 176. 10s. 6d.

J. C. Flügel, B.A., D.Sc. *The Psychology of Clothes*. (International Psychoanalytical Library.) London: The Hogarth Press. 1930. Pp. 257. 21s.

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Kyung Durk Har. *Social Laws: A Study of the Validity of Sociological Generalizations*. Chapel Hill. University of N. Caroline Press. 1930. Pp. xii + 256. 18s.

Harald Höffding. *Jean Jacques Rousseau and His Philosophy*. Tr. by L. E. A. Saidla and William Richards. New Haven: Yale University Press; London: Humphrey Milford: Oxford University Press. 1930. Pp. xxiv + 165. $2; 9s.

N. R. D'Alfonso. *Ostia e il Tevere*. Roma: Società Editrice Dante Alighieri di Albrighi e Segati. 1930. Pp. 12. Lire 3.

Moritz Schlick. *Fragen der Ethik*. Wien: Verlag von Julius Springer. 1930. Pp. vi + 152. RM 9.60.

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W. Rivier. *L'Empirisme dans les Sciences Exactes*. (Archives de la Société Belge de Philosophie.) Bruxelles: J. Perebooms. 1930. Pp. 13. Fr. 2.

Abhay Kumar Majumdar, M.A. *The Sāṅkhya Conception of Personality*. (Edited by J. K. Majumdar, M.A., Ph.D.; Foreword by S. Radhakrishnan, M.A., D.Litt.) Calcutta University Press. 1930. Pp. xvi + 158.

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W. Pepperell Montague. *Belief Unbound. A Promethean Religion for the Modern World*. New Haven, U.S.A.: Yale University Press. London: Oxford University Press: Humphrey Milford. 1930. Pp. 98. $1.50; 7s.

L. W. Grensted. *The Philosophical Implications of Christianity*. Oxford at the Clarendon Press. 1930. Pp. 20.

George Boas. *Critical Analysis of the Philosophy of Emile Meyerson*. Baltimore: The Johns Hopkins Press. London: Oxford University Press: Humphrey Milford. 1930. Pp. iv + 146. 8s.

E. Dupréel. *Le Renoncement*. (Archives de la Société Belge de Philosophie.) Brussels: J. Perebooms. 1930. Pp 36. Fr. 4.50.

THE INSTITUTE AT HOME: ANNUAL MEETING

THE Fifth Ordinary General Meeting of the Institute was held at University Hall, 14 Gordon Square, W.C. 1, on Monday, September 29, 1930.

Professor J. H. Muirhead, M.A., LL.D. (Chairman of the Council), gave the following address:—

"LADIES AND GENTLEMEN,—Nothing can feel itself at home in the world without 'a local habitation and a name.' The Institute of Philosophical Studies has had a name for the last five years, but hitherto it has been dependent on charity for its local habitation. It is most grateful to the Electrical Federation for its generous hospitality during these years, but it has always felt (as guests, however welcome, are apt to feel) that it was on its good behaviour in the Federation's palatial offices, and philosophical simplicity was somewhat overawed by its gilded officials. Here, if not perhaps 'at ease in our own inn,' we are at any rate like St. Paul at our own charges 'in our own hired house,' and I wish to begin by referring to the appropriateness to our work of the quarters in which, by the kindness of the Trustees of the Williams' Library, we now find ourselves.

"University Hall was founded in Gordon Square in 1848 in commemoration of the Dissenters' Chapels Act of 1844, which was rightly regarded as a landmark in the history of civil and religious freedom described at the time by the Committee appointed for the foundation as ensuring 'to us and to future generations a full Protestant liberty of private judgment unfettered by the accident of an ancestral creed and protected from all inquisitorial interference.'

"It was designed in the first instance as a residence for students at University College whose parents were in sympathy with 'the great principle of unlimited religious liberty'; but also as a centre for the teaching of 'theology, mental and moral philosophy, and other branches of knowledge either not at all or not fully taught at University College.' With these objects it was placed under a succession of Principals whose names were sufficient to establish its reputation as a centre of advanced thought: Francis W. Newman, Arthur Hugh Clough, Richard Holt Hutton of the *Spectator*, William B. Carpenter the Physiologist, Henry Morley, the Professor of English Literature in University College. With these deserves to be mentioned as its most ardent supporter and chief benefactor, Henry Crabb Robinson, who in his *Diaries* describes the opening meting on October 16th, almost precisely eighty years ago, when Richard Martineau gave the address to 'some dozen ladies and eight or ten young men'—an audience, he complains, that would have been much larger if proper notice had been given as of a public event.

"It was in commemoration of Crabb Robinson and the group of famous men and women whom he knew at home and abroad, including Goethe, Schiller, Wordsworth, Coleridge, and Charles Lamb, that the interesting frescoes on the walls were designed.

"In 1882 Manchester New College, under the principalship of James Martineau, was transferred to this building. In the later 'eighties I was myself for some time a student in the College, and the Hall in which we now are seems

to be peopled with the presence of vanished leaders of thought in those days who came to the fortnightly debates that were held in it: Martineau, Stopford Brooke, Philip Wicksteed, Estlin Carpenter, William Clarke, and other well-known Fabians and economists.

"On the departure of Manchester New College to Oxford the premises were taken over by the Trustees of the Dr. Williams' Charity, which had been founded with similar objects some two hundred years before.

"I mention these facts to show that in finding a home here the Institute of Philosophical Studies enters not only a building but a great tradition of free and untrammelled thought upon the subjects that most profoundly interest the human mind. The need is greater and more widely felt than ever. The Universities in London and elsewhere have recognized it to a fuller extent than in the days when the Hall was founded; but they necessarily leave much of the field untouched. There are many who didn't *take* philosophy while they were at College, but have since been taken by it; there are many who took it, but desire to take more of it under freer conditions; besides these there is a growing number of men and women who have received their training in the school of life, and have been led to philosophy by the necessity of finding a deeper answer to its problems than general literature or their own unguided thought can supply. We believe that the opportunities that are here offered by the Institute only require to be better known to be more widely appreciated, and Mr. Garcke, to whom we owe so much in obtaining this home for it, will speak on what is proposed in this respect. I will conclude by saying one or two things for myself in expansion of what I have written in the short Foreword to the Fifth Annual Report.

"In the first place, I would repeat what I there said of my conviction that the thing we here propose to do can't be done in a corner by a few academically trained persons. They need the help of those I have already referred to as coming with the wider and more forcible training of life. We invite these not only to receive but to give. In doing so we place ourselves on a frankly democratic basis. To my mind democracy in its essence is as far from the rule of mass opinion as from any kind of dictatorship, whether of the fascist or of the proletarian type. It consists in no material but in a spiritual power: first in the power to see that it takes all sorts to make a world—sorts not determined merely by external conditions, but also by inner gifts and forms of experience; and secondly, in the humility to recognize the value of the contributions of others remote from ourselves in mental outlook and the circumstances of their lives. Even apparent failures may have much that is positive to teach, and John Bradford's 'There but for the grace of God go I' is only a half-truth, if we let them go at that and do not try to discover something of the wisdom locked in their failing hearts.

"For the world that all sorts and conditions make (and this is my second point) is a world of souls. Underneath material needs are needs of the soul. I mentioned (after Green) three of these in my Foreword: the need 'to be free to understand to enjoy.' This Hall is dedicated to the first of these as the condition of the others. We enter into that freedom and seek to use it in the interest of the second: the need to understand. But we do so with no intention of separating this from the other two, but in order to use it to attain a higher level of freedom and a truer enjoyment. Freedom has its laws and enjoyment has its conditions, which call for the disciplined intelligence that we may make no mistake about them.

"Philosophy (and this is my third point) is an intellectual discipline devoted to the understanding of other forms of experience, logical, moral, political,

æsthetic, religious. There are some who would confine it to that; but they forget that philosophy, though dealing with theory, is itself a form of experience and an enjoyment comparable to the highest. We live, I have said, in a world of souls, and souls live in a world that takes them beyond the visible to an invisible with which they seek to enter into communion. This they do, some in one way, some in another, through devotion to art, science, ordinary everyday duty, religion. 'In various manners,' as F. H. Bradley put it, 'we find something higher which both supports and humbles, both chastises and transports us.' Philosophy does not take the place of any of these. Yet to some it is the main way of coming into touch with the unseen world and with what is higher than themselves.

"It is because these rooms offer a better opportunity than we have hitherto enjoyed of following this quest in common, perhaps of forming some sort of real society of seekers, that their acquisition forms an important step in the history of the Institute."

A resolution for the adoption of the Annual Report and Statement of Accounts for the year ended March 31, 1930, proposed by the Chairman and seconded by Mr. E. Garcke, was put to the meeting and carried unanimously

The proceedings then terminated.

CORRESPONDENCE

To the Editor of the *Journal of Philosophical Studies.*

Dear Sir,

One must not expect to be allowed to bandy arguments with a reviewer, and in the general tenor of Mr. M. Kaye's notice of my book, *The Fallacies of Fatalism*, there is nothing to be complained of. On two points, however, he has, doubtless through a misunderstanding, seriously misrepresented my position.

Firstly, I do not hold that an entity is, in respect of its essential nucleus, "self-caused" and "self-sufficient" and "impervious to external influences." If any entity deserved these descriptions, that could be nothing less than the universe itself. The physical entities of which I chiefly treat in the first part of my book are molar bodies such as appear on the earth's surface. Each of these I hold to be in part, but only in part, the cause of itself. The existing fragment of rock is not *merely* an effect of the disintegrating factors which caused it to separate from the cliff. The living and developing embryo is not *merely* an effect of the conjunction of sperm and germ cells and of the maternal nourishment subsequently supplied to it.

Molar entities are not only pervious to external influences. The higher they stand in the scale of physical evolution, the more pervious they become. The relatively impervious pebble remains itself for ages. The short-lived organism depends for its survival on adaptation to environment, and an important part of this adaptation, in the higher animals, consists of their reactions to sense-perceptual stimuli. The highest known type of "self-determination," in human persons, depends upon conceptual knowledge opening up a wider terrestrial environment than is ever apparent to the senses—an environment which includes many other individuals and organized human groups, the influences of and reactions to which are or may be subject to moral valuations.

Secondly, as to "chains of causation"—*i.e.* serial sets of events in which each consequent has a causal antecedent. The reviewer, in accordance with his misunderstanding already alluded to, supposes me to hold that "the chain of causation within a physical entity may exist independently of other chains of causation." In fact my book does not discuss such *internal* chains of causation, and I should agree to the statement in question only if taken in a relative sense. There may be a continuity of ultra-microscopic oscillations which appears as the cohesion and gravity of an individual pebble; while the complex continuing life of an individual organism seems to involve a network of chains of causation in harmonious co-operation. In both these cases there is a relative, but not more than a relative, independence of external agencies. In fact, however, it is not internal, but external, "chains of causation" which I discuss in Sections 22–23 of my book. These are conceived to depend on the successive interactions of separate entities with one another, such interactions occurring locally, here or there, on the earth's surface. Whatever laws of causation there may be, every sequence of cause and effect is a strictly particular or circumstantial fact.

While, according to the law of gravity, bodies, whether near together or far apart, attract one another in the way that the law describes, the other forms of causation, physical, chemical, and biological, are not thus proportionate to distance. They depend upon the actual local contact or the close proximity of the bodies interacting, and when bodies which might interact are separated by a sufficient (it may be a very small) space interval,[1] no interaction takes place. As I put it on page 35, "all terrestrial physical causation depends upon some collocation of entities which interact with one another in their natural ways, because of their having come into contact or into such proximity as causes them to interact."

[1] "A miss is as good as a mile."

Of the chains of causally connected events which are simultaneously occurring at all parts of the earth's surface, a vast number must be practically independent of one another. Most events and series of events, whether of physical, biological, or social import, which are now happening in Bristol, are quite independent of those happening in Southampton or any other English or foreign town. Even within a very limited area causal sequences may be independent of one another. Most of the persons and vehicles passing one another in a crowded street are bent on different, or at least disconnected, errands, and do not affect one another by the fact of passing. Here, however, the fact of proximity does make possible both street accidents and personal meetings of dramatic import; whereas bodies, and their interactions in series of events, when occurring sufficiently far apart, can have no practical effect upon one another.

It is in the constant casual meeting of chains of causation of diverse local origin—a meeting which is, of course, caused, but not caused according to any uniform law—that, I believe, a real physical contingency resides. Physical reality is compact of "accidents," although it is only to a few of the more startling ones that the name is popularly given.

Yours sincerely,
CHARLES E. HOOPER.

SOUTHAMPTON,
October 8, 1930.

INSTITUTE NOTES

OBITUARY NOTICE

We regret to announce that Mr. Emile Garcke, the first Treasurer of the Institute, and one who took a prominent part in its foundation, died at his residence, near Maidenhead, on November 14th, at the age of 74. During the first six years of the Institute's life Mr. Garcke has been a generous supporter, having made himself responsible on many occasions for annual deficits. His loss will be deeply lamented by all members of the Institute.

Lent Term begins on January 13th and ends on March 25th. The following courses of lectures will be given during the Lent Term:—

"Modern Ethical Problems," a course of six lectures by Professor J. L. Stocks, D.S.O., M.A., on Fridays, at 5.45 p.m., at University Hall, 14, Gordon Square, W.C.1, beginning January 16th, 1931. The lectures are free to members of the Institute. For non-members the fee for the course is 12s. 6d.

"Some Philosophical Aspects of Modern Industrial Society," a course of six lectures by Professor P. Sargent Florence, M.A., Ph.D., on Tuesdays at 5.45 p.m., at University Hall, 14, Gordon Square, W.C.1, beginning January 20th, 1931. The lectures are free to members. For non-members the fee for the course is 12s. 6d.

"Biology and Social Life," three lectures by Professor Julian Huxley, M.A., on Tuesdays, at 5.45 p.m., at University Hall, 14, Gordon Square, W.C.1, beginning March 3rd, 1931. The lectures are free to members of the Institute. For non-members the fee for the set is 6s. 3d.

The full syllabus of the Session can be obtained on application to the Director of Studies, University Hall, 14, Gordon Square, W.C.1.

WIRELESS "TALKS" ON PHILOSOPHY

Six talks entitled "To Philosophize is to Civilize—The Place of Reflection in Man's Cultural Achievement," by Professor A. E. Heath, at 8–8.30 p.m., January 6th, 13th, 20th, 27th, February 3rd, 10th. Daventry 5XX.

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* By the Memorandum of Association, a member of Council on accepting lectureships with fees *ipso facto* ceases to be a member of the Council or Governing Body, and shall only be eligible for re-election after he shall have ceased to hold such office. This provision applies to those original members of Council whose names appear in the syllabus as lecturers for the Session 30–31.

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PRINTED IN GREAT BRITAIN
BY UNWIN BROTHERS LIMITED
LONDON AND WOKING